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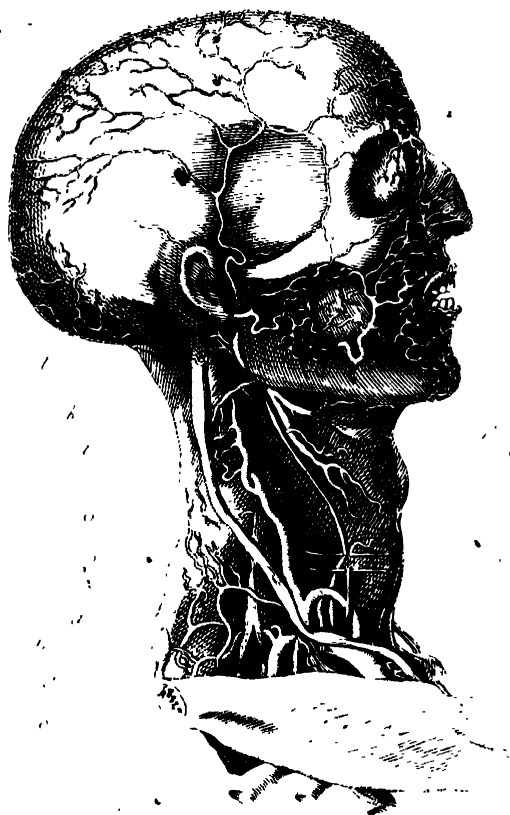
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ART. I. *Reports of Cases treated in the Baltimore Alms-house Infirmary.* By THOMAS H. WRIGHT, M. D. Physician to the Institution.

ENCEPHALIC PATHOLOGY.—It is familiar to the profession, that active inflammation of the pulmonary mucous and submucous textures, is often associated with signs of congestion about the brain and its coverings, which adds much to the sufferings of the patient, and occasionally gives rise to cephalic complication of a very serious character. Such complication is imported by intense pain, great fulness, weight, &c. in the head, extra sensibility to light and sound, and sometimes oppression of the functions of the sensorium, approximating lethargy or stupor. Acute pneumonic catarrh, especially if profound or protracted, not unfrequently involves a liability to have the high irritation of the vascular system by which it is characterized, devolved on the brain or its membranes, with so long continuance or such great concentration, as very much to embarrass or finally to impair the encephalic organism. Unbalanced movement of circulation, deep engorgements, and ultimate effusion within the head, are consequences that may be apprehended, when severe inflammatory action abides in the mucous or serous tissues of the chest, and more particularly when super-excitement lingers long in the over-irritable constitutions of childhood, or in the sluggish systems of age, where the capillary, exhalent, and excretory series have lost in part the attribute of vigorous contractility, and are on that account the more readily embarrassed by congestions or overwhelmed in effusion.

called to the patient in the night, and found him in a state of insensibility, succeeding a short but violent paroxysm of convulsions with delirium, in which much force was necessary to retain him in bed. The unconsciousness which had ensued was not that of deep, silent stupor or coma, but consisted in abolition of sense, associated with constant moaning and rapid incoherent muttering. There was also retraction and rolling of the head, with forcible, spasmodic jerking, in the muscles of the neck and shoulders. The involuntary and unconscious expression of pain and suffering were attended by incessant and forcible spitting, (or rather puffing from the mouth with great violence,) a white frothy sputum which appeared in great quantity about the patient and his bed. The eyes were rolled under the arch of the socket, face bloated and flushed. Bleeding from the arm was repeated, and the head cupped freely at numerous points. Deep stupor succeeded in a few hours to the movements of agitation, and death took place early on the following morning.

Dissection revealed per-acute meningitis over a large space of the pia mater of both hemispheres. Either surface of the vertex portion of the membrane was loaded by injection, resembling a fine web of tubes gorged by blood and gelatine. *Pus* was spread in such palpable quantity between the arachnoid and pia mater, that it could be freely collected by passing the edge or back of the scalpel with a light scraping movement over the surfaces. The septa of the convolutions were injected and infiltrated. Pia mater of the lobular surface extra fine red arborescence. Medullary pulp as low as the great commissure, pink tinge, numerous red points, marking section of the nutrient vessels of the pulp. Small serosity of the lateral ventricles. No denatural state, engorgements, or super-colouring, about the membranes of the cerebellum, pons, or medulla oblongata.

Remarks.—The cerebral developments supervening to pure catarrh in this case were revealed abruptly, and without any known cause. The patient had not left his bed, nor suffered exposure in any way—there was no error of diet, or change from the spare, light regimen on which he had been kept, nor had there been at the time any sensible vicissitude of weather, likely to elevate the tonic forces of the constitution suddenly, to the pitch of new inflammatory revelations. From the first signs of disorder about the head, (by heaviness, dull pain, &c.) to the catastrophe of the case, the whole interval did not exceed thirty-six hours, yet in that short period inflammation of part of the brain tunics had reached the maximum of in-

tensity of which the sero-fibrous membranes are susceptible, short of disorganization, and exhibited in its result the unusual phenomenon of profuse suppurative meningitis.

Case II.—*Meningitis.*—J. Mount, aged twenty-seven, fair complexion, dark hair and eyes, above middle size, form muscular, admitted into the Baltimore Alms-house, November 17th, 1829. Disease chronic remittent fever, complicated with pneumonic catarrh. Patient had ague two months before, (in September,) recovered in a few days, went to work, was exposed to wet, had return of fever, with slight chills, accompanied by dull pain of right and left side, cough, soreness of the breast, and soon after tightness of the abdomen with swelling of the lower limbs. Cough was hard and frequent, with expectoration of thin phlegm, breathing quick and short, without acute pain in the breast; very sensible impediment to expansion of the chest.

Symptoms when admitted.—Face pale and bloated: countenance dull, (look anxious?) no pain of head: respiration small and fast, no wheezing: cough short and sharp, not very frequent: scant expectoration of thin mucus: no pain, and no longer any soreness in the breast; power of inspiration less than natural: expiration abrupt. Abdomen round and tight; right and left hypochondrium tender: extra volume and hardness in both as of hepatic and splenic enlargement with condensation; palpable definition and hypertrophy of spleen: evolution of liver not plainly discriminated. Pressure on hypochondria embarrassed respiration and speech. Some ventral dropsy and hard œdema of the lower extremities. Fever continued, form partially remittent: chills of accession, more properly exasperation, not regular, sometimes distinct, often imperceptible: paroxysms, prolonged and intermingled, small abatement once in twenty-four hours: never complete solution; no perspiration. Pulse quick, with some jar of tension; rate of stroke varying from 110 to 125: temperature of surface constantly above par of health. *Diagnosis.* Pneumonic catarrh complicated with symptomatic chills, induced by cold co-operating with season causes, on the constitutional diathesis of recent intermittent. Special pathology; chronic inflammation with effusion of lymph and gelatine among the thoracic textures, cellular membrane of the pleuræ and mediastinum; solidification of liver and spleen: ventral and superficial cellular dropsy.

Treatment.—Venesection; cupping hypochondria and inferior thorax; emetism; purging; vesication around the chest; antimonio-mercurial diaphoretics; diluents; absolute diet; total recumbency. Ge-

neral bleeding, about twelve ounces, was practised four times; cups renewed around the chest and hypochondria to the number of fifteen, (five and six together,) at intervals of a few days; afterwards epispastics, successive applications. Calomel, nitre, and antimony, or calomel, ipecac., squill, and digitalis, were given continuously until ptyalism was revealed, and that state restored to a moderate amount a second, and even a third time, with an interval of extinction between each impression. Diet was strictly regulated, and quiet in bed uniformly maintained.

This active plan of treatment steadily pursued for a long time, accomplished the design of its institution only in part, and by tardy triumph over some of the complications of the case. The symptomatic chill was lost and renewed many times at irregular intervals, of a few days to a week, and finally ceased altogether. Abdominal and cellular infiltrations receded early in the treatment, and remained absent. It was in condensation of the liver and spleen, and the denatural state of the forces of circulation and breathing, that the most persisting impediments to convalescence were always encountered. Those viscera were palpably solidified, long after they ceased to be sore to pressure. The pulse of the patient kept steadily over a hundred, stroke sharp and irritable; heat of surface fever standard. Respiration all the time betrayed unnatural quickness with restriction, especially about the base of the thorax, as if from inaction, disability, or fixed obstruction, (by pseudo connexions,) in the moving powers and textures, the muscles and membranes of the abdominal margin of the chest. In this state of the case apparently unsusceptible of further melioration by depletion, general or local, or by the free excretions, now long maintained from all the surfaces, it was decided to turn the treatment mainly on the resort to that dissolving controul often exercised over old congestive impairment, with interstitial condensation, by the relaxing influence and constitutional shock of full vomitings.

The worst and last embarrassments of the case gave way to the impression of liberal doses of ipecacuanha and zinc once or twice repeated. The pulse fell to near the par of natural excitement immediately on the second repetition of free vomiting, losing its irritative frequency, and becoming soft and regular, at the standard of eighty. Respiration was liberated at the same time, in an equal degree, and after very sensible constraint for two months before, the patient now breathed with the slow regularity of the healthy order of that function. The case seemed at last every way convalescent, all tenderness of the liver and spleen were extinguished, the latter only be-

traying to deep pressure some remains of induration; cough was entirely lost, chest fully expansible and sounded well to percussion in every region, countenance easy and natural. The case came under care in the middle of November, and was constantly the subject of the antiphlogistic and alterative regimen, until the 1st of February ensuing, when all the palpable embarrassments having ceased, treatment was intermitted. Patient remained in hospital: diet more liberal but not gross.

On the 15th of February this man came again under notice. He was in bed, complaining of being very unwell. Symptoms at this time—obscure chills; heat and feeling of fulness; sense of numbness, all over the body; heaviness and oppression of the head without positive pain; mind dejected; face with some red flush; no pain of the breast, cough, or difficulty of breathing; pulse ninety, full and jarring. Ordered, venesection, (sitting up,) till depletion was felt; cups on temples and forehead; calomel, nitre, and jalap, each ten grs.; regimen bread water. Next day, 16th, countenance more anxious; face sallow; head heavy and disposed to ache; eyes injected: cellular tissue of sclerotica fine rose tint, pupils dilated; tongue furred, some tremulous movement when put out; breathing slow and heavy; no cough or pain of the breast. Patient complained of stiffness in the arms and hands, which he attributed to the bleeding: both arms benumbed from the shoulder to the fingers; pulse 110, contracted and hard. Blood drawn yesterday, solid coagulum, border inverted, yellow-white sheet of fibrin on surface of coagulum. The symptoms announced arachno-spinitis of the second grade. Repeat venesect. p. r. n.; cups behind the ears and over occipito-cervical space; parietal planes shaved; wet, (cold,) envelope for the head constantly renewed; tart. ant., nit. potass., g. acaciæ, repet. tert. horis: stimulating enemata.

17*th.* Pulse quick, small, and fading under pressure; skin hot and moist; partial stupor, but conscious when roused: acknowledged head-ache; articulation imperfect; eyes red suffusion; pupils wide: face more sallow; tongue dry; tremor of tongue and head. Slight spasmodic movements of the trunk and thorax; arms drawn to sides and motionless; frequent efforts to move the body without the power to change place; breathing hurried and irregular with moaning. Ordered epispastics to parietals and legs, camphor julep with ammonia, mercurial friction freely on abdomen and thighs, bowels to be moved by enema, cordial fluid nutriment.

18*th.* All symptoms aggravated; stupor complete; eyes closed, (lid fallen,) pupils contracted; patient sunk down in bed: skin cold

and moist; pulse thready; breathing small and slow. Death occurred on the 20th.

Dissection ten hours after death.—Cranial aspect of dura mater natural every where, except over posterior lobes of cerebrum; adhesion to the cranium at the point indicated stronger than elsewhere; membrane in this part injected and blood-stained for some inches. Dura mater cut up and reflected to expose posterior cerebral lobes, showed high florid patching of its inner face generally—deepest and with gelatinous exudation, where it covers posterior lobes. Arachnoid tunic super-coloured, and spread with semi-concrete lymph over its whole vertex portion; posterior surface of same membrane coated for some extent by pus in considerable quantity. The superficial vascular plexus of the cerebellum, pons, and medulla oblongata, highly injected and infiltrated. Lymph effused in mass around corpus pyramidale. Medullary pulp of a pink tinge generally; softening, with appearance of pus, in part of posterior lobes of cerebrum. Small serosity in lateral ventricles.

This was a second case of diffuse meningitis, apparently developed from constitutional irritation, kept up by chronic inflammatory catarrh. The primary super-excitement had resulted in lesion of part of the fibrous organism of the chest and abdomen, by interstitial deposit, with condensation of texture. At the same time, long tumult of the vascular function would seem also to have left the capillary system in a state of weakness and irritability, prepared for sudden congestive derangements, on the new application of any causes disturbing the balance of forces in that system. Why the terminal series of the membranes of the encephalon, should partake the liability supposed, in a special degree, is not readily intelligible. The facts in the present and similar instances point to the conclusion alleged, but leave the manner and the reason unexplained. Particular inquiries were made at the time of attack, in the case just reported, but nothing could be learned respecting the probable exciting agency.

Case III.—*Secondary Cerebritis.*—William Dunihan, aged about forty, middle size, person lean, sanguine temperament, sandy hair, light eyes, fair complexion, received into the Baltimore Alms-house, January 27th, 1830. On the 28th I found this patient in ward with the following symptoms. Fever high; pulse 110, full, round, and jarring; skin hot. Face flushed in patches; colour pale rose red, with slight tinge of yellow; eyes faint bilious hue; countenance distressed; head painful. Breathing quick and laboured, with audible blowing, or bellows-like, (soufflet,) sound of respiration.

Cough frequent, low, and hissing, as if extinguished or lost in the bronchi and trachea; voice flat; harsh aspiration, (husky;) expectoration of thin reddish-yellow sputum; no distinct pain in the breast. Abdomen generally large and tense; right hypochondrium prominent and super-sensitive; instant shrinking from moderate pressure over hepatic space. There was preternatural tenderness to the touch on the right thorax as high as the sixth rib; no sudden hurt or check in making full inspiration. Diagnosis. Inflammation of parenchyma of right lung and liver.

The student in charge had bled the patient freely on the evening before, (27th,) and had exhibited calomel and pulv. antimonialis to full purging. Ordered to-day, (28th,) venesection, (patient sitting,) till acknowledged by feeling and pulse; cups to right thorax and hypochondrium; calomel, gr. ij.; pulv. antimonialis, gr. iv.; nit. potass. gr. vj. tertiis horis; neutral solution, ℥viij.; tart. antimon. gr. ij.; ℥ss. in aq. hord. every hour until nausea or diaphoresis. Diet and drink, gruel and rice water.

29th. Symptoms meliorated; countenance less anxious; slight flush of cheeks; breathing less bellows-like, and slower; voice still rough and soundless, (tracheal,) sense of weight in the chest, without pain or stitch in drawing the breath; cough frequent, softer and less restrained; free expectoration of pale, bloody, and frothy mucus. Temperature of surface reduced; pulse 110, full and well developed. but less jar of stroke than on the 28th. Right hypochondrium flatter and less sore to pressure. Blood drawn yesterday buffy in excess.* Prescription—repeat general bleeding to eight or ten ounces; cups on thorax close as convenient to the former; epispastic on right hypochondrium; calomel and nitrous powders with antimonial solution continued. Diet and drink as before.

30th. All symptoms better; countenance placid; breathing slower and scarcely audible; voice articulate; cough less frequent; expectoration easy; skin soluble; heat temperate; pulse ninety and soft; no pain in the breast; breathing free; abdomen natural volume. Blister raised well; blood last drawn, cupped, with small buff.

From 31st of January to 9th of February, amendment was steady: fever always mild grade after 30th of January, faded away altogether by 4th of February; cough and expectoration were gradually declin-

* The sheet of fibro-gelatin concrete on the blood, (drawn 28th,) was readily separated, being spontaneously almost detached from the crassamentum. Put into alcohol, it became a beautiful white cake, perfectly circular, five inches diameter, soft silky surface both sides, five-eighths of an inch thick, heavy, elastic, and so tough that it could be neither cut or torn but by much force.

ing, the latter losing all tinge of blood; breathing soft and equal; skin temperate; pulse about eighty; no pain any where; slight tenderness of liver to deep pressure.—Rest in bed, regulated diet, soluble bowels, with light mercurial friction on right hypochondrium, constituted the total regimen from 4th to 8th of February.

On the 9th of February the aspect of this case was wholly changed. At our visit this morning the patient was found in a state of insensibility, position supine, arms thrown down and pressed close to sides, head drawn back, mouth wide, upper eyelids very much raised, eyes retroverted, pupils under arch of the orbit, eyeballs in rapid tremulous movement; face cadaverous. Breathing was high, quick, and hard, loud bronchial rattle, with muttered moanings; skin hot; pulse 112, large, round, and jerking. The change described had occurred in the night past—in the morning the man was unconscious, and nothing could be learned of the circumstances or manner of attack. The patient was cheerful the evening before, eat his light supper as usual, and had not complained of head-ache or any thing else. The weather was cold, but without any remarkable variation at the time, and the patient's place and accommodations in hospital were sheltered and comfortable.

Within a few hours the circumstances of this case exhibited a striking contrast. On the 8th it presented all the signs of convalescence which are common attendants on the solution of inflammatory fever, viz. general relaxation, temperate skin, pulse small, soft, and equal. The following day these were substituted by the phenomena above described, all representing a grade of excitement alike intense and universal. It was scarcely credible, that to a crisis so marked by debility and languor of all the functions, should supervene in a moment, a constitutional display of so exalted reactive struggle. Peracute cerebritis was the unequivocal character of this new explosion. Prescription—venesection; scalp shaved and cups applied freely over the head, succeeded by cold steadily renewed; venesection repeated if pulse was not softened by first bleeding and cupping; lower extremities immersed in hot water; stimulating enema. On the 9th deep coma, head still retracted, eyes fixed introversion, cornea invisible, pulse small and rapid, surface cold, breathing quick, short and rattling, with abrupt spasmodic interruption. Patient died in the night of 10th.

Dissection twelve hours after death.—Dura mater very bloody, by discharge from rupture of small vessels in tearing up cranium; membrane itself thorough red, from capillary engorgements. Arachnoid, small serosity on surface; pia mater, extreme red aborescence.

Cerebrum; gray and white pulp softened, the latter reddish. In many points exposed by slicing cerebral substance, deposits of pus, appeared so distinctly, and in such quantity, as to render its nature unquestionable. Some of this purulent formation was apparent in nearly the whole superior and central parts of the front, middle, and posterior lobes of the cerebrum. The substance of the cerebellum was firm, and showed no extra natural appearance.

The lungs of this subject were carefully examined. Left lung natural. The central portion of middle lobe of right lung showed distinctly the fading marks of the red condensation, so well described by Andral. The colour of the part was higher than natural, parenchyma more compact and firmer than the rest of the lung—surface of the solidified part showing patches of effused lymph. Compacted substance insensibly lost in the surrounding crepitous texture of the lung—similar marks of recent congestion, presented on superior convex surface of the liver.

Suppurative cerebritis was the essential pathology revealed by dissection; and is the more remarkable, from the infrequency of the lesion so rapidly accomplished in this instance. Even inflammation of the more common grade, is comparatively a rare affection of the medullary pulp. The apparent inaptitude of the substance of the brain and nerves to take on inflammation, is noticed by Bichat and others.

Case IV.—*Cerebral Congestion—Remittent or Alternating form.* —J. Cavanaugh, aged forty-two, sallow complexion, black hair and eyes, admitted into the Baltimore Alms-house, January 12th, 1830. Disease irregular intermittent, with secondary pneumonic catarrh. Paroxysms of chill and fever, varying type, had lasted four weeks prior to admission; pneumonic catarrh supervened in the last two weeks. Patient had cough, sharp, harsh sound, no expectoration. breathing small, quick, confined; limited expansion of chest, no pain in the breast. Pulse in general small, soft, and frequent—palpable condensation of liver and spleen—some hydrops ventralis—slight anasarca of lower extremities.

Treatment.—Local; cups to thorax, right and left hypochondrium: epispastics. Constitutional: mercurial alterative course, calomel. squill, and ipecacuanha—with aperients pro re nata. Cupping was repeated as seemed indicated, and the alterative plan—with occasional modification of agents—continued five weeks. The case improved slowly under the course, but convalescence was incomplete. Without sensible mercurial impression, the signs of chronic enlarge-

ment, solidification, &c. of liver and spleen, and all infiltrations disappeared. There was left, however, cough, quickness and constraint of breathing, with irregular fits of symptomatic ague; pulse more frequent than natural. The nature of the remaining embarrassments, (chronic congestion, and lymphatism of part of the serous textures,) with the success of the same resort in former similar instances, led to the employment of a few active emetics, in the present state of the case. The result was entirely satisfactory. Restriction of breathing was taken off, cough ceased, and constitutional irritation was quieted; and the pulse ranged about the par of health. Convalescence seemed now founded on salutary reaction in all the functions.

The case was discharged from medical regimen in the middle of February, and called for no further notice for an interval of eighteen days; the patient's appearance, feeling, &c. implying no need of more than rest and time. On the 3d of March, Cavanaugh again complained of feeling unwell. He spoke now of confusion, lightness, amounting to vertigo, and some pain in the head, with dullness, and depression of spirits, symptoms which were first felt the day before, and had increased.

The pulse betrayed only slight febrile movement, and the bowels being slow, a purgative was ordered, with abstinence from all exertion. In the night of the same day, the man fell suddenly into a state of unconsciousness, soon followed by universal, violent, and constantly renewed convulsions. The student formerly in charge of the patient, came to him in a few minutes from the attack, and discriminating the analogy of the present, to previous cases of brain invasion, supervening to prolonged pneumonic catarrh, very judiciously acted on the indication which the character of lesion in those cases furnished; notwithstanding much general debility of the patient consequent to recent illness, he was now bled with great freedom; the amount of blood taken, estimated about twenty-two ounces. The bleeding was followed by subsidence of convulsions, and restoration of consciousness in the course of an hour, patient still complaining of confusion of head, with some pain. Towards night, disorder of head increased, and symptoms of threatened convulsions re-appearing, venesection was repeated, about sixteen ounces, and an active cathartic administered. Next day, patient very weak, head easy, pulse small and soft, pupil of right eye much dilated. For many succeeding days there was alternate absence and renewal of fits of vertigo, and pain of head; pupil of right and left eye becoming in turn preternaturally large. By strict rest, moderate purging, and light diet,

these signs of cerebral derangement gradually ceased to be renewed, and the patient was discharged from hospital in the latter part of March. altogether convalescent.

CASE V.—*Concussion, Paralysis, Apoplexy.*—A robust female lunatic. chained in one of the cells of the Baltimore Alms-house, on account of a paroxysm of furious mania, to which she was subject at intervals. contrived to get at liberty, and seizing an old woman. (also lunatic,) who happened to be near her, threw her and struck her head many times with great violence on the floor. The old woman was sensible when rescued from her mad assailant, but she had received a severe hurt on the side of the head. There was a ragged cut in the left temple, and when I saw her, (half an hour after the beating,) the whole scalp of the left half of the head was excessively puffed out from the skull, by infiltration of blood. There was now no external bleeding from the cut, but the tumour constantly increasing, it was plain that there was still internal hæmorrhage. The scalp was laid open across the tumour, the whole length of the left parietal bone, the effused blood cleaned out, and the torn arteries, (front, middle, and posterior branches of the temporal,) tied. The part was dressed in the common way, by a few sutures, lint, compress, and bandages.

During the incision, dressing, &c. of the scalp, the patient lay in a dull, moaning state, conscious when spoken to loudly, and sometimes replying to questions with seeming comprehension of their meaning, yet it was apparent that a lethargic state was growing on her. and from the great violence with which her head had been repeatedly struck on the floor, it was likely that the brain had suffered some lesion more direct and palpable than mere concussion. From the symptoms, no less than from the nature of the injury, extravasation within the head was apprehended as a probable complication. The patient was quiet, except low moanings; through the evening of the day of her hurt, capable, though with difficulty, of being roused to consciousness, and then taking part of the light nourishment offered her. Pulse small and weak, urine flowing involuntarily, bowels inactive, until moved by enema. On the next morning, patient very listless, breathing slowly, and with long puffing expiration. Left side of the face now somewhat retracted; right cheek relaxed, lower lip dropping in right angle of the mouth, paralysis of right upper extremity. Patient showed signs of comprehension, but could not speak. In the morning of third day from the injury, patient comatose, stertorous breathing, apoplectic manner. still

breathing out, in the puffing or smoking way; total paralysis of right side; distortion of face; pupil of right eye dilated; pulse very small, surface temperature low. Died in the evening of third day.

Dissection twenty hours after death.—Much red serosity on cranial surface of dura mater, exfiltration post mortem—same fluid in abundance between dura mater and arachnoid. Superficial viens very full of black blood. On the right posterior lobe of cerebrum, a small coagulum, about a scruple weight of extravasated blood involved in cellular tissue of pia mater. Copious serosity by gravitation around the cerebellum and medulla oblongata. Medullary pulp of cerebrum softening, not otherwise denatural. Lateral ventricles dropsical, supposed three to four ounces, old deposit.* Serous membrane of ventricle very pale, plexus choroides atrophied, one or two vesicles, hydatiform,—attached to plexus, in posterior corner of ventricles. When the anterior cornu of ventricles was displayed, the left corpus striatum presented an unnatural yellow-brown appearance—cutting into the coloured part of this body, disclosed extensive abscess degeneration of its central portion. It seemed an old incavation, partly empty. but still containing some glutinous puriform fluid, resembling brown soft soap. The cyst, if full, might contain about two drachms.

Remarks.—The state of the brain in this case left the main purpose of investigation unexplained. At most, the marks and degree of encephalic lesion were insufficient to remove doubt as to the direct mode of interference with the cerebral functions, by which death was caused. There were no traces of inflammation, or special congestion, in the brain or membranes, and there were no signs during life of inflammation. The clot of extravasation on the right cerebral lobe, was too inconsiderable to account for the lethargy, paralysis, apoplectic stupor, and death. The water in the lateral ventricles had nothing to do with the derangement of the sensorium, by which the functions of animal life were fatally invaded. The accumulation had all the characters of chronic cerebro-ventricular dropsy, to which, when gradually formed, the brain accommodates itself without difficulty, and the fluid not having been effused upon the important

* The medium septum of the ventricles was entirely demolished, and the two original cavities thrown into one. This obliteration of the septum was not here, (as is supposed to be generally the fact when the partition is broken down,) the result of mere distention of the ventricles mechanically tearing the septum, but was palpably the work of disease in the membrane itself. There was left an arched border of the septum along the under margin of the raphé, which was thickened, and showed a distinct ulcerous line. The septum had been melted away by ulceration

nervous textures, (of respiratory life,) about the cerebro-spinal union, its presence in the upper cavities was comparatively indifferent, doing little harm while there, and only dangerous from its liability to get suddenly elsewhere.

The agency of concussion in the case, is entitled to particular consideration, from the peculiar fitness and direct tendency of the manner of injury to produce that result. It was stated, that the patient's head had been struck forcibly against the floor many times, so as to cut through the integuments, break the principal branches of the temporal artery, and load the scalp with extravasation. But the phenomena during life, differed in many respects from the signs of concussion, when so profound as to result in death by collapse. Unconsciousness was gradual, not sudden; there was hemiplegia, with partial tonic spasm, not universal or equal impairment, or extinction of motivity. The full or final developments were those of positive oppression of the brain—not mere suspension of the cerebro-vital functions. Venous engorgements were palpable all over the surface of the brain, and the sinuses full. Concussion, and extra venous congestion concurrently, aid the diagnosis; but leave to conjecture the partial form of paralysis, with the interval of intelligence preceding apoplectic consummation.

It was noticed in exploring the cerebellum, that the fourth ventricle was preternaturally large, and cavernous, as if having been distended by fluid. It was empty, with a small laceration near its inferior sinus. Whether it had lately contained water which was effused by the violence done in striking the head, or the membrane of the ventricle was rent in handling the brain, cannot be discriminated. The dilated state of that cavity however, implying previous dropsy there, as well as of the lateral ventricles, the rent in the floor of the fourth sinus, and the effusion of its fluid, indicates a probable auxiliary explanation of the symptoms, and issue of the case. The suggestion offered by some pathologists, that the sudden death frequently ensuing to general dropsy, might be caused by abrupt descent of fluid from the lateral ventricles, on the nervous origins about the cerebro-spinal junction, has appeared to receive confirmation by examinations* I have made to detect the source of that phenomenon. In the present case, it is possible effects similar in kind may have owed their occurrence to a previous dropsical state of the fourth sinus, and the sudden diffusion of its fluid. The less immediate, or rather the less decisive interference with the vital

* Communicated in "American Journal of the Medical Sciences," for August, 1826.

forces of respiration, circulation, &c. in the present, than in the former class of cases, may perhaps be referred to the comparatively weaker shock from minor quantity of the embarrassing agent.

A question of some interest, touching the physiology of relation between the brain and nervous system of motion, presents itself to notice, in connexion with one of the revelations of the foregoing case. In the distribution of the physical functions, (mainly the animal vital properties,) over which the brain presides, to special portions of the cerebral organism, distinguished physiologists have assigned to the corpora striata, the office of regulators of the locomotive acts of the lower extremities, the directors, or guides of movement—not the source or imparters of the motive power. To learn how far, or in what way the regulating power of movement was affected by the palpable lesion of the corpus striatum in the present instance, particular inquiry was instituted, touching the common manner and carriage of the patient. The information obtained of those having charge of this person as a lunatic was, that nothing remarkable was known respecting her ordinary personal manner or gait. The woman was described as inclined, like other lunatics, to move about a great deal, that she went often into the yard of exercise attached to the department of females, and appeared in general to walk as well as others of her age.* In reply to the question, whether the woman had been observed to become at times unsteady in her walk, apt to lose her balance, and either fall, or have to hold by something for support, it was stated by the keeper of the cells for females, that she had often remarked the subject of the question to totter considerably, or "stagger" so much at times, especially on first rising up, and attempting to move forward, as to appear not to have full command for the moment of her lower limbs. The woman, however, was not known to be more liable than others, to get falls, nor did she need support or aid in walking. Nothing more satisfactory could be learned on this head, and it remains doubtful, whether the old degenerescence of the left corpus striatum had any connexion with the occasional unsteadiness, spoken of by the keeper of the female lunatic department. Even had the imperfection of voluntary motion been more palpable and constant, than would seem to have been the case, the direct or exclusive connexion of that fact, with decay of the corpus striatum could not be realized, inasmuch as there was other states of the brain calculated to derange its physiological attributes of relation with the animal functions. There was old and large

* The subject of these inquiries was about fifty years of age; of full person, and had enjoyed general good health.

dropsy of the lateral ventricles, and appearances of a previous similar condition of the lesser serous cavities; there was also an obvious general character of relaxation and atony, (if it may be so expressed,) of all the elementary textures of the encephalon. The brain and its coverings were soft, flaccid, watery, and, (with exception of the surface veins,) for the most part colourless.

The total state of the encephalon in this subject, previous to the injury which proved fatal, only serves to illustrate anew, that the cerebral organism may be profoundly diseased, without external marks corresponding to the nature or extent of the existing lesion.

CASE VI.—*Meningitis—Tuberculoid Degeneration.*—A man aged thirty-nine, tall, spare form, was admitted, November 14th, 1829, on account of chronic head-ache, of long standing, which, by its constancy, as well as degree, had rendered him wholly unable to pursue his ordinary occupation.

The only complaint in the present case was of a dull, oppressive, unremitting head-ache, not violent, but which, by its uniformity and long-continuance, had rendered the patient unable to follow any business. The disorder of head was represented to have commenced three years before, in paroxysms of various interval and duration. but now for many months greater than formerly, and scarcely at all remitting. The whole head sore and aching; pain always greatest in the occipital region.

This man's appearance was striking. Face long and thin: countenance dejected, dull, and invariable; eyes protruded, with a vacant unmeaning look, as if there existed in the mind, no other interest or consciousness than the perception of the pain in the head, in which every other intellectual sense appeared to be absorbed; eyes unnaturally prominent, axis of the pupils directed forward, and habitually fixed in that aspect: pupils large, vision perfect Mind sluggish and abstracted, perceptions dull, speech slow and monosyllabic; sense of hearing natural.

The whole of the animal functions in this case betrayed marked defect of natural excitement; nothing appeared of the reactive property, denominated, (by BROUSSAIS, with seeming propriety,) vital erection. Physical inertia prevailed every where; the temperature was low, pulse slow and weak, respiration small, bowels torpid, movements languid, still there was little palpable constitutional pathology. There was no fever, tongue clean, appetite sufficient, nutrition moderate, no pain in any other seat than the head. At the time of admission, the patient was not in a state to need con-

finement to bed, and though commonly lying down, he frequently moved about in the listless indifferent way, which characterized all his manner.

Diagnosis.—All the symptoms seemed to indicate an abnormal state of part of the encephalic textures. A portion of the meninges were supposed to have undergone some thickening, induration, or ulcerous decay, tardily consummated by low chronic inflammation of those textures. Part of the membrane of the cerebellum was indicated as the probable seat of degenerescence.

Treatment.—This was limited for some time to the renovation of excretions by the bowels and skin, by the exhibition of calomel, guaiacum, and compound extract of colocynth, in doses to move the bowels, short of purging; the tepid bath, with after surface friction, employed concurrently; cups to the hind head and neck, were the first local mean; aftewards vesicatories in succession, and from defect of relief, or palliation of pain, by either, vegetable caustic was laid over the occipito-cervical junction, and after separation of the eschar, kept in the state of an issue. None of those means accomplished any salutary change in the circumstances of the case; pain of the head remained uninterrupted and undiminished; the constitutional state not sensibly altered. The general treatment at an after period was chiefly by tonics of the mineral class, with aperients; the form mainly employed, carbonate of iron in liberal doses, combined with rhubarb and soda, in small portions: antispasmodics were also exhibited in connexion with tonics. The valerian, often exercising peculiar and powerful controul over cephalic neuralgia, was tried freely, at one time in combination with the carb. ferri—again with infusion of bark and aromatics.

Nothing that was done, altered or improved the state of the case. The patient's account of his feeling was every day the same, his look and manner underwent no other change than a slow increase of the dull inertia of mind and body; remarked on first admission. That torpid state augmented continually, and arrived at last to nearly total defect of all motive inclination; the patient keeping always the same posture of body, interested in nothing, never speaking, except when addressed, and then only to repeat, that he had pain in his head: the latter was now constant. The man eat regularly, very moderately; had no fever at any time; no pulmonary, gastric or intestinal complication. All medical treatment was omitted after a few weeks.

At the end of two months after admission, this man appeared much the same, in all obvious respects, as at first, some small emaciation

only excepted. Early in the third month, (February,) the movement of the upper limbs became imperfect and unsteady. At first both arms showed inaptitude to motion, with tremor; afterwards the right betrayed most inability, and soon became absolutely paralytic, the left continuing feebly obedient to the will. In losing all power of movement, the right arm had acquired an increased sense of touch: lifting it from the bed, or handling it lightly, gave pain, of which the patient complained, by exclamation, moaning, and contraction of face. The limb was not swelled, or hot. Early after paralysis of the arm, the right thigh and leg were similarly affected, becoming incapable of voluntary movement, tender and painful when touched, pressed, or moved. It was noticed about the same time, that the head was getting turned to the right, with some retraction, and the appearance of contortion and shortening in the neck. The patient was incapable of correcting the wrong posture of the head himself, and all attempts to change it by others, gave him pain. To those symptoms succeeded continuous decay of the intellectual properties, marked by imperfect and incorrect perception of what was said to him; irritative replies to questions; stammering, and at last, extinction of articulate speech. Profound indifference, and refusal of every thing ensued; stupor supervened, and the patient died in March, nearly four months after entering the Infirmary.

Examination twelve hours after death.—On removing the crown of the skull, the seat of disease displayed itself at once. The dura mater covering both cerebral lobes behind, was degenerated, and ulcerous over a space of many inches. Further investigation showed the diseased portion of the great meninx, involved and matted together, with the arachnoid and pia mater, the whole thickened to a great degree, and full of abscesses; the morbid texture sinuous in places, and ragged by ulceration. The membranes within the limits indicated, had lost entirely the natural form and display of those textures; and were blended in all the confusion of soft tuberculoid conversion and decay. The diseased mass adhered intimately to the surface of the brain, but the substance of the latter was not sensibly altered below the line of connexion; the surface of relation with the morbid membranes was blackened. No other lesion was discovered within the head, and nothing morbid about the spinal cord.

Remark.—The subject of this report had suffered almost unremitting head-ache for nearly three years. Did the pain in this case follow the inceptive and advancing stages of the local development in the membranes of the brain? or was the latter incident to primary and prolonged neuralgic irritation in that seat, and conversion of

structure, the consequence, rather than the cause of pain, &c.? Of the nature of tuberculoid conversion in textures, we know too little to be able to say how they are produced—or whether inflammation, strictly speaking, is a necessary precedent to their beginning, or consummation. In some textures—(mucous and cellular tissue, where very vascular)—tuberculoid degeneration is often blended with a mode of sub-acute phlegmonous inflammation. In other textures, both compound and simple, muco-serous, fibrous, or fibro-serous, (skin, fasciæ, the fibrous membranes, &c.) tuberculoid condensation is frequently accomplished without the concomitants of pain, swelling, heat, colour, &c. proper to inflammation. The distinctions of the red and the white inflammations, the indolent, and the active, may be thought sufficient in their modes and degrees, to explain the obvious differences in the progress and result of the changes of structure, but it is hardly yet clearly established, that essential inflammation is the uniform attribute of all degenerating or converting processes, in organized textures.

Case VII.—*Hemiplegia—Exalted Sensibility.*—A black man, aged fifty, large frame, muscular, but wasted, was admitted, December, 1829; complaint general debility, infiltration of the lower limbs, inability to walk, and fixed pain in the back of the head. Patient said that he had been suffering from head-ache five weeks, and had gradually lost his strength till he was no longer able to go about, during the last few days his lower limbs became swelled.

At the time of admission, the patient was unable to support himself standing, and felt giddiness with pain of head on being raised up; pain chiefly in the back of the head, occipital region sore to pressure. There had been no hurt of the head, by a blow, fall, &c. as the probable first occasion of pain and soreness in the part. The general state of the patient betrayed prolonged constitutional irritation. Eyes slightly injected and watery—tongue dry, white—villi raised, surface gluey—pulse small, with frequency—skin dry and harsh—breathing slow. Abdomen collapsed, muscles of the belly rigid, epigastrium sore, bowels inactive; no palpable visceral complication. This man had been a patient of the house nine months before; admitted then on account of partial insanity, ensuing to fits of the convulsive form, supposed to be caused by intemperance. By rest and restraint, he had become well, was discharged, and now returned in the state described.

Treatment for the present was palliative of constitutional derangement, and directed chiefly to the surfaces, internal and external of

excretion. Mild aperient agents, in under doses frequently renewed, were associated with general sponging by tepid spirituous fluids; diet, simplified, and regulated. Cups to the epigastrium were employed concurrently, with the means indicated; succeeded, after some days, by epispastics to abdomen and legs. The case altered little for some time, presenting continually, in all the systems of nutritive life, the same characters of low irritation which it was mainly the design of the simple medical plan to gradually extinguish. Pain of the head was constant, imbecile intellect, general inability of motion, soreness in all the soft parts; torpid bowels; tender belly; tongue red and dry, &c.

Friction with more stimulating agents; strong rubefacients were renewed actively over the trunk, and along the spine; and about the cervico-dorsal tract of the latter, the potass caust. was applied at defined points on both sides, in a manner substituting the action of moxas. The less exciting tonic agents were at the same time combined in exhibition with the sedatives of irritation, aqueous solution of extract of quinine, with the neutral diaphoretics; diet and drinks rendered lightly cordial; under every modification of treatment, the patient reduced slowly, lost inclination for every thing, except weak cordials; became dull and drowsy, eyes injected, posture of body invariably to the right side, bowels almost invincibly constipated, urine scant, pulse small, slight feverishness.

Early in January, third week in hospital, hemiplegia was revealed. When first discovered, paralysis was incomplete; the right inferior extremity was wholly immobile by will, while the right arm could still be moved by the patient, though it was benumbed and stiff, compared with its fellow. The whole right side, head, limbs, and trunk were sore to touch, and handling and lifting the limbs of that side gave great pain. In a short time the upper, as well as lower right extremity was totally palsied; retaining, however, extra sensitive property. The head of the patient was now directed constantly to the right side, and drawn back, as well as turned, so as to present that appearance known by the term wry neck. Attempts to move the head towards its natural axis gave great pain; pressure near the occipito-cervical junction caused shrinking, exclamation, and distortion of face. The right eye became involved in deep conjunctivitis, impairing vision; left eye slightly affected in the same way.

In the further progress of the case, cerebral excitability was expended to the point approximating extinction of the intellectual functions. Attention by the patient was excited with difficulty, and existed but for a moment, followed by drowsiness, almost amount-

ing to positive stupor. The sensitive property of the textures was elevated unduly, as the sensorial power was depressed. All the surface of the body, every tangible part showed an acute sense of soreness to pressure, however slight. The patient died the 20th of January, 1830. For many days before death, vision was totally lost in consequence of the occupation of the anterior chamber of both eyes by a dense yellow pus.

Examination.—The head being opened in the common manner, the dura mater showed its natural appearance, without marks of engorgement, inflammation, or other change. On turning this investure back, so as to uncover the proper tunics of the brain, the membranes of the posterior cerebrum were overspread by a large amount of pale red albuminous matter. When this was wiped away, something presented in the same space, having the appearance of a flatted tumour, overlaying and compressing in some degree the occipital portion of both hemispheres of the brain. The foreign substance was found, on further examination, interposed between the arachnoid and pia mater, detaching and elevating the former to the extent of some inches; it cohered to the pia mater with considerable firmness, but was separated by the fingers, and taken up entire. The mass as removed was ash-coloured, semi-solid, lacerable, but tough, exhibiting none of the characters of organized texture. On close examination, the true character of this substance became manifest; its central portion betrayed what it was by retaining distinctly something of the colour as well as other qualities of old coagulated blood. The surface of the brain appeared flatted for the space covered by the coagulum; the membranes above and beneath the clot were dark-coloured.

Remark.—From the breadth and thickness of the coagulum yet remaining, the amount of extravasation it represented must have been some ounces. At what time the blood was poured on the brain, and whether suddenly, by hæmorrhage, or gradually by a species of exhalation, is matter of conjecture. The patient had been affected at a former period by convulsions and partial insanity; he came into hospital five weeks preceding death, with head-ache, in the back of his head especially, giddiness, low excitement, and great muscular debility. But at that time, the cerebral functions of intellect, the senses, consciousness, &c. were in the normal state, and were only gradually abolished, by sensorial and constitutional exhaustion, in the last week of life. Although the history and prior circumstances of the case denote the existence of serious chronic irritation of the brain, and hence proclivity to pathological developments there, it is yet probable from the course and order of cerebral symptoms, that the

blood effusion, to the extent found, was an affair of slow accomplishment. Extravasation may have commenced before or after the patient's admission into hospital, and which was the fact, there is no means of proof; but in either case, it is most likely the accumulation was completed by successive escape of small quantities of blood from the vascular plexus of the pia mater, than by active hæmorrhage.

The analogy of symptoms and phenomena in the two last cases is close and striking. Head-ache, same region of the head, prolonged into chronic and constant pain, was the primary and prominent affection in both cases. At a period, about equally remote from the crisis of each, total hemiplegia occurred to both, attended by super-sensitiveness to touch over the whole body of each patient, and with that property especially and alike exalted in the paralyzed parts. Retroversion to a degree, retraction and fixedness of the head to the right occurred in both, and in each the catastrophe of the case was accomplished in gradual abolition of consciousness, stupor, and death, unattended by any kind of tumult or struggle. But the parallel was not entire in the two cases; the constitutional state of the patients differed materially in some important points. In the one case, the forces and actions of physical life, exhibited a character of simple impassive atony, almost wholly negative of essential or constitutional pathology. In the other, (second case,) the vitalism and functions of the apparatus of nutritive life, organisms of relation and sympathy, betrayed every where the impress and the forms of deep and permanent irritation. It is not a little remarkable, that the most palpable departure from the normal constitutional state should have occurred in that one of the two cases, in which the local cause, (the only obvious cause in either,) of derangement, was apparently the least qualified to produce the greater disturbance in the total economy. The interference with the cerebro-vital functions in the latter case was by a cause which seemed to have acted mechanically and slowly—while in the former instance, part of the encephalic organism, the nutrient textures of the brain itself, were thoroughly diseased and degenerated. The rationale of consequences, so contrasted and unlikely, under the circumstances, is not easily made out.

Case VIII.—*Dropsy of the Head—Secondary Hæmorrhage.*—The following case, admitted into the Baltimore Alms-house, 14th of November, 1830, came under examination 15th of same month. Charles Berryman, African, forty years of age, person large, very muscular, countenance vacant, eyes natural, look heavy, position supine, whole manner inert and listless; no fever, pulse regular

and soft, stroke about 65. Patient rational but heedless; answers slow and brief; acknowledges dull head-ache; no other pain; appetite good; bowels costive; general muscular debility. Voluntary motive power equal every where.

No other history of the case could be obtained of the patient, than that he was by occupation a sailor, cook of a vessel, had been weak and unable to do any thing for two months, knew no cause for his infirmity, had not been hurt, was not sensible of any other disorder than head-ache and debility. Head was explored; no mark of injury and no defect of form.

Diagnosis was obscure and difficult. A normal state of part of the brain textures was indicated. Pressure by slow fluid accumulation or tunic development, otherwise induration or softening of medullary tissue; seat of special embarrassment above tuber annulare, whether central pulp, striated body, or optic couch. The patient was requested to get up and walk; body bowed forward, arms thrown out and dangling, gait staggering.

Patient was taken in charge of Mr. SELDEN of the student class: general instructions—moderate purging, (compound senna infusion,) diet farinaceous, rest in bed; if head-ache rose to pain, local or general bleeding, guardedly, according to indications.

After being a few days in hospital, patient was observed to fall occasionally, particularly at night, into a kind of illusion allied to mild insanity. He talked or muttered to himself, as it seemed, unconsciously, and was in the habit of getting up at night, going to the bed of other patients and pulling off the bed-clothes; sometimes he would place himself by one of the beds, and mistaking it for the stove, stretch out his arms to it in the manner of one warming his hands. Of both those errors he was unaware, and on being told of his wanderings, denied the fact; when it was insisted that he pulled the clothes off other patients in the night, he said he did not know it, and that they were fools to let him do so. To prevent his wandering at night, a fastening was put on his leg at bed time. This man improved slowly in appearance, and in the functions of mind and body. He became quiet and regular in conduct, more animated and lively, even jocose at times, particularly about his light fare, and acquired much more power and controul of his movements, than when received. He almost ceased to feel head-ache, and the chief error of health was torpid bowels, for which it was necessary frequently to purge him. At his own earnest solicitation his diet was made more substantial, and soon after, (5th of December,) he was discharged hospital, reported for light work.

Late in the same month, 25th of December, while carrying an armful of fire wood down a short flight of steps, Berryman fell, and almost immediately was seized with convulsions, which lasted about half an hour. Mr. Selden saw him during the fit, and finding signs of congestion, with a full pulse, bled him somewhat freely. Mr. Selden regarded the convulsion as of the epileptic form; the spastic actions were mainly in the muscles of the upper extremities, shoulders, neck, and face, with foaming at the mouth. The spasms ceased with the bleeding, partial lethargy followed for some hours, but no positive stupor; he was conscious, but dull of being roused. Nothing of the straining respiration, the snort, or slow puffing breathing of apoplectic assault attended the fit, nor was it followed by sensible impairment of the moral faculties or of the voluntary motive powers. In a week Berryman was about again, as well apparently as before the fall, convulsions, &c. When he had recovered completely from the shock of that accident, it was endeavoured to ascertain of him whether he was subject to fits formerly, or before coming to the Alms-house. He remembered having been attacked in the same way once, possibly twice before, but was certain that he had never been subject to fits at any period of his life, until within the last four or five months. He was now put on the use of zinc, valerian, and hyosciamus, as antagonists of epileptic invasion, his diet somewhat restricted, and the privilege allowed him of exercise in the open air.

Six weeks after the fall, fit, &c. 25th of December, Berryman fell again, 10th of February, at the out door of the hospital, while bringing a bucket of water. The same result ensued as before. He went immediately into convulsions,* in every respect like those with which he was affected on the former occasion. He was again bled by Mr. Selden, and slowly recovered consciousness, power of speech, &c. But now, instead of recovering steadily or fully, as before, he appeared on the day following the fit to be more dull and insensible than on the evening of the paroxysm. Something like the comatose state supervened, which though not wholly impenetrable, yet rendered it difficult to excite any acknowledgment of recognition, or any reply to what was said to him. He would answer questions when much urged, and his replies were coherent, but he would lapse directly into total heedlessness. His breathing was slow and regular, eyes natural, pupils contractile, no paralysis; he moved all his limbs in

* It is doubtful whether the falls caused the fits, or sudden congestion of the brain, precursory of the fits, caused him to fall. In the last instance, the door step being covered with ice, he was observed by persons present to slip, and seemed to fall on that account.

turn, when made to comprehend the request to do so. Sinapisms, stimulating enemata, and vesicatories were employed without benefit. He fell off gradually, and died on the sixth day from the last fit. Slight muscular convulsions supervened once or twice the day before his death.

Examination of the head twenty hours after death.—Scalp very thick, one-fourth of an inch, and hard texture, resembling the tawny fibro-ligamentous tissues. Skull thick, compact, thorough ossification, no palpable intertabular texture; fossæ of convolutions deep and strongly-marked. Dura mater general purplish hue from engorgement of the superficial veins of the convolutions. When this membrane was cut round, and lifted off the hemispheres, the surface of the left anterior and midlobe presented an appearance I have not seen before on the surface of the brain. The colour of the region indicated was a deep brown-yellow, with a tinge of green, giving an appearance very much resembling a fresh smoke stain, particularly from green wood, on a white ground. The hemispheres, (brain pulp firm,) being sliced down to the level of the commissur. mag. it was discoverable by the touch that the ventricles were replete with fluid. By a slight incision in their length, dividing all but the membrane of the cavities, the reflection of their contents was so distinctly reddish that it was pronounced to be blood. When discharged, however, it proved to be water, and translucent, but with a strong red tinge. The ventricles were exceedingly dilated, the septum entire, but the communication being free by the foramen, (of Monro, greatly enlarged,) under the anterior crus of the fornix, the two cavities were essentially one, and formed a great cyst capable of containing many ounces, in the centre of the brain. The lining of the ventricles was sensibly thickened, of a dull yellow colour, and disposed to separate or peel off easily from the sides of the cavities. The fornix being raised, the passages before and behind, to the infundibulum and the fourth ventricle, were each enlarged very much, sufficient to admit the point of the finger. The corpora striata and thalami were natural.

Up to this stage of the examination, nothing was found in the state of the brain, satisfactorily explaining the latter symptoms and the catastrophe of the case. On raising the inferior portion of the front lobes of the brain, they were no longer distinct as usual, constituting the hiatus anterior cerebri, but were closely cemented by tough lymphy matter of apparently old formation. When torn apart, the surface of attachment showed the same smoke-stained hue, that was so distinct on the external aspect of the left hemisphere. As soon as the lobes

were freed from their cohesion at and behind the falx, and lifted from the basilar fossæ in front, all uncertainty about the seat and nature of the fatal lesion, was at once removed. The whole anterior inferior surface of the left hemisphere, was enveloped in a mass of semi-solid black-red grume, evidently from blood extravasation. The arachnoid and pia mater, very much injected and distended, appeared to form the web or cyst of the effused and partly decomposed blood, and when it was attempted to lift the part higher, for better inspection, the membranes burst, with a copious issue of matter of thick consistence and grayish-red colour,* followed by collapse and seeming loss of considerable part of the hemisphere.† Upon further search a free communication was found, (rather a continuous cavity,) leading into the left inferior cornu or sinus of the ventricle on that side, which was filled as high as the mouth of the sinus, with very black grumous blood. The posterior cornu of the left ventricle was also nearly filled with the same matter, and both the middle and posterior horns of the right ventricle contained some blood, (half dissolved and gravitated to the end of the sinuses,) which had found its way into those cavities by the foramen under the fornix. The reddish tint of the water of the ventricles was thus explained; the grosser part of the blood had precipitated, leaving the water stained.

The source of extravasation was readily discovered, and considerable as the effusion was, we were surprised that it had not been greater, nay instantly fatal, when a vessel large as a crow-quill was found to be the point of hæmorrhage, and that vessel completely broken or torn fairly across. It was the root or trunk of the cerebralis media, the proper carotid within the head, ruptured about half an inch above the triple branching of that artery by the side of the sella turcica. The basilar or cardiac end of the artery was plugged by a coagulum protruding a little from its mouth, and filling the lumen of the vessel for a quarter of an inch. In attempting to disengage the coagulum, the artery broke, by only slight force, below the internal end of the clot; the coats of the vessel at the place of first fracture, were not palpably diseased. It was remarkable that an artery of such magnitude, suddenly truncated, at a point where it carries so full a current, should not have given out more blood than was shed; and not less so, that the delicate tunics of the brain, pia mater, and arachnoid, should have served to detain the injected blood from all effu-

* Like broken pulp of brain and blood mingled.

† The brain tissue was broken down, diffluent, and mixed with blood, for some extent around and within the digital cavity of the left sinus.

sion on the base of the skull, and cause it to open a way through part of the medullary pulp into one of the central cavities.

It would be satisfactory, if it were possible, to know at what time the breaking of the artery in this case occurred. Can it be supposed to have happened at the time of the first fall the patient got, as described, six weeks before death, and that he was able to go about, as he did, for more than five weeks after such lesion, apparently as well as before the accident? This was my first impression. Judging from the dark, gelatinous state of the blood, its complete precipitation in the water of the ventricles, and the reduced diffluent condition of part of the brain pulp, I conceived those changes must have required something like the time intervening from the first fall to the end of the case. On reflection I think that judgment erroneous. It is difficult to reconcile the functions and powers of the patient in the interim, with so great injury of the organ of the senses, of intellection, and the regulator of the voluntary motions. It accords better with the total phenomena of the case, to date the rupture of the artery at the epoch of the last fall, six days before death. The water in the ventricles was clearly an ancient evil. The moral and physical inertia of the patient, at and before admission, his constant dull headache, with occasional partial insanity or state of illusion, his weakness, tremors, and staggering gait, all import the long existence of a cause so likely to produce the class of symptoms always present in the case. It may be added, that the colour of the ventricular membrane, its thickened and easily separable state, confirms the probability, that the fluid accumulation, the effect of former inflammatory action in the membrane, was of comparatively remote accomplishment. On the day following the man's death, his brother came to the house, and on being questioned as to his knowledge of the primary affection, reported, that during the past summer, his brother, while acting as cook of a vessel, on one occasion slept all night on deck, and was thought to have been moon-struck, (the expression used,) for that he was found next morning disordered in intellect, and otherwise unwell, and had continued feeble, and occasionally wrong in mind ever since.

The case just reported brings forcibly to mind one recorded by Mr. Bell, and which will be found in the Periscope of the present Number, Sect. Pathology.

Baltimore, Feb. 1831.

ART. II. *Description of the Circulation of the Head and Neck in a Case after one Carotid Artery had been Tied.* By VALENTINE MOTT, M. D. Professor of Surgery in the College of Physicians and Surgeons of New York. [With two Plates.]

I TIED the carotid artery in this case for the safe removal of a carcinomatous tumour, situated upon the right side of the face and neck, and occupying a considerable portion of each.*

Shortly after the operation the patient was attacked with a pulmonary affection, under which he gradually sunk, having lived three months and nineteen days.

I gladly availed myself of the opportunity of obtaining the head for dissection, in which I was assisted by Drs. DAVID L. RODGERS and ALEXANDER F. VACHE, who were at that time my pupils. The head was removed from the body by sawing through the sternum, so as to leave the clavicles attached, the superior extremities were removed from the trunk, and the dorsal vertebræ and ribs divided between the second and third, so as to leave it of a bust-like shape. This preserved the shoulders in such a way, that the subclavians and their branches might be injected. The ascending arch, and a portion of the descending aorta, were also included in the preparation.

To secure the filling of the arteries of the head and neck, a long pipe was passed up the aorta into the left carotid, and a fine wax injection was thrown in with great care, and as the subsequent account will show, with great success. The aorta was next injected to fill the subclavians and their branches.

The following description of the arteries is taken from the preparation, and they are delineated as far as possible in the annexed engravings.

1*st.*—*The arteries that supplied the right side of the face and neck. See Plate I.*

To give a regular description of these arteries would be incompatible with the principle of collateral circulation; inasmuch as they are found to vary in different subjects, for "the inosculation is never carried on by any particular set of vessels, but by all the arteries of the neighbouring parts."

Upon removing the integuments on the forepart of the neck, and

* For an account of this case see "The Medical and Surgical Hospital Register," New York, 1818. Vol. I. Part II.

laying bare the carotid artery, from the innominata to the angle of the jaw, its caliber was found completely obliterated from its origin to its bifurcation, leaving a firm, ligamentous cord, which was divided into two parts, showing the place where the ligatures had been applied.

The vein and nerve were perfectly natural. The right subclavian was much enlarged, being equal in size to the innominata from its origin to the scaleni muscles.

The left carotid was enlarged to twice its natural diameter, its branches increased in the same ratio, and assumed a tortuous and irregular course.

When we take into consideration the connexion which the arteries of the left, have with those of the right side of the head, and their free inosculation with the subclavian, we have in our minds the branches which must necessarily supply the place of the right carotid. First, we have the branches arising from the subclavian, which are very numerous; second, those arising from the left carotid, which are still more numerous.

A minute detail of the numerous vessels which communicate with the carotid, would be tedious and uninteresting, and would perhaps be impracticable were it deemed expedient. Suffice it to notice the principal branches, and to give a general description of the smaller, but no less beautiful inosculations. We find then, arising from the right subclavian, first, the arteria thyroidea inferior; second, the cervicalis profunda; third, the cervicalis superficialis; and fourth, the vertebral arteries.

The inferior thyroid, as it arises from the subclavian, divides into four branches: two passing downward and outward, and the other two passing upward; the latter are called the ramus thyroidea, and the thyroidea ascendens. These require particular attention from their large size, and the important supply of blood which they furnish for the support of the arteries of the neck. While the superior arteries were enlarged to twice their natural diameter, the two inferior, viz. the transversalis colli and the transversalis humeri, although arising from the same trunk, and receiving their currents of blood in the most favourable direction, still retained their natural dimensions. But this phenomenon usually occurs in the circulating system. John Bell observes, "that in whatever way the demand of blood upon an artery or set of arteries is increased, the effect is an accelerated motion of blood towards that artery." And again, "any demand of blood causes an enlargement of the arteries, leading to the part which demands the blood."

Guided then by this principle, we need not be surprised that the subclavian is so much enlarged from its origin to the scaleni muscles; for here it affords a supply of blood to new and important parts. The ramus thyroideus passing upward to the thyroid gland, and anastomosing with the superior thyroideal artery, was one great source of blood, its branches were large and tortuous, forming communications in every direction with those from above.

The thyroidea ascendens is naturally a small and unimportant branch; it was here three times its usual size, mounting up the neck in a zig-zag direction, lying close to the vertebræ, forming frequent communications with the vertebral artery, dividing into many small branches at the upper part of the mastoid muscle, forming a beautiful plexus of vessels with the mastoid branch of the occipital artery, and sending branches to all the muscles on the upper part of the neck.

The cervicalis profunda and superficialis, were much enlarged, sending frequent branches upward to anastomose with the descending branches of the occipital artery. By far the most important and interesting part of the circulation yet remains to be described.

2d. *The arteries of the left side of the head and neck. See Plate II.*

The left carotid passing up the neck, equal in size to the innominata, furnished the greatest part of the blood for the right side.

In order to determine what particular arteries were enlarged, it is necessary only to enumerate the branches given off from the carotid, and more particularly those which arise from its forepart. Below the jaw there are four; viz. the superior thyroid, the lingual, pharyngeal, and the maxillaris interna, which inosculate with open mouths, having the appearance of continuous trunks, and sending a plentiful supply of blood to the neck and internal parts of the face.

The labial and temporal arteries, leaving the axilla under the angle of the jaw, passing upward upon the face, send off small branches in a beautiful and fantastic manner. Branches, which before were considered unworthy the attention of the anatomist, now rise into importance. The plexuses and inosculations formed by these branches excite alike our surprise and admiration, and elucidate, in the most beautiful manner, the principles of collateral circulation. These arteries, in general, are large and tortuous, and have frequent communications among themselves. The arteries most enlarged, were the mental, the inferior labial, the coronary, and the angularis. The optic artery was likewise much enlarged, beautifully anastomosing with the angularis.

So freely did these arteries inosculate with those of the right side,

that before the operation was finished, it was necessary to secure the labial artery in a ligature. This was clearly illustrated by the retrograde course of the injection after death, which passed freely from the arteries of the opposite side, filling the superior portion of the labial to the point at which the ligature had been applied. The temporal artery was of its natural size, receiving its blood from "all the arteries of the neighbouring parts," from the ascending branches of the occipital, the left temporal, the ophthalmic, and the transverse facial. This free communication was distinctly shown by the injection, which passing down the temporal, completely filled the external and internal carotids, and several of their branches; particularly the inferior portion of the labial, which is seen emerging from under the jaw, to pass upon the face. The labial terminated at that point where the mental is given off. The mental passed on to its usual destination, and received blood from its fellow of the opposite side.

All of these arteries will be easily and readily recognised by referring to the plates.

PLATE I.

In this plate is represented the right carotid artery, obliterated from the innominata to the bifurcation. The success with which the circulation was carried on to the head, through the inosculating channels, may also be seen in the enlarged anastomosing branches.

Fig. 1. Right bronchial tube.
2. Aorta.
3. Arteria innominata.
4. Ramus thyroidus arteræ thyroideæ.
5. Sterno-cleido mastoideus.
6. Thyroidea ascendens.
7. Scalenus anticus muscle.
8. Subclavian artery after it has passed the scaleni muscles.
9. Transversalis humeri of its natural size.
a. Transversalis colli.
b. Cervicalis superficialis et profunda.
c. Portion of the carotid separated by the ligatures.
d. Obliterated carotid.
e, Superior thyroidal artery.
f. Inferior portion of the labial as divided in the operation.
g. Mental artery.
h. Superior portion of the labial, where tied in the operation.
i. Plexus of arteries formed by inosculations of the ascending thyroid and a descending branch of the occipital.
k. Descending branch of the occipital.
l. External carotid.

PLATE II.

This plate will give some idea of the success which attended the injection of the left side of the head and neck. Most of the more considerable vessels are here delineated, but the beauty of the preparation far surpasses the plate in the minuteness with which the vessels are filled. All these are preternaturally enlarged. Only a few of the arteries which are most enlarged, will be referred to in the explanation of this plate. There is no variety in the course or distribution of the arteries.

Fig. 1. The two portions of the sterno-cleido mastoideus muscle.
2. Left carotid as large as the innominata.
3. Left subclavian artery external to the scaleni muscles.
4. Superior thyroid artery.
5. Labial artery much enlarged.
6. Mental artery twice its common size.
7. Par vagum raised up, and seen crossing the carotid artery.
8. Arch of the aorta.

New York, Oct. 10th, 1830.

ART. III. *Case of Cancer cured by repeated Excisions and a Diet of Indian Corn, Zea mays, Linn.* By LEONARD PEIRCE, M. D. of Sutton, Mass.

THE pathology and treatment of cancer are still involved in much uncertainty. The investigation of its causes with the best mode of treatment has for a long period of time employed some of the ablest minds of which the profession can boast. But notwithstanding the numerous explanations which have been given of its causes, and the still more numerous methods of cure, embracing nearly every variety from the most simple and cautious to the most complicated, the disease is still where it was centuries ago, in the first rank of the most formidable and terrifying of human maladies. Its bare name is associated with almost certain death; at the first intimation of its approach, life recoils with a wish that it had never been called into being; and on its actual existence, fortitude itself vanishes and leaves the mind a prey to the most gloomy anticipations. Whoever shall be so fortunate as to point out a method of treatment which will ordinarily prove successful, may rest satisfied, that without any other monument, his name will be remembered with gratitude in all enlightened countries, so long as cancer shall continue to afflict his fellow

creatures. However unsuccessful the efforts of surgeons may have been, it is still their duty never to relax their labours so long as a chance remains for improvement.

In offering a history of the following case to the profession, I shall not perhaps present any thing entirely new, yet I believe some portion of the treatment is different from any which has ever been recommended by writers on the subject, and from the entire success which seems to have attended it, is entitled to a respectful consideration. But should I fail of presenting any thing new, and offer nothing but the details of an ordinary case, I shall readily be pardoned for the interest I may manifest in its relation from the subject of it being my mother. Sufficient time has elapsed since the last operation to inspire considerable confidence in the success of this course of treatment, and should it be adopted by others, it is hoped the result will be made public.

The disease was in the right breast. She first discovered a tumour about the size of a chestnut, in September, 1825, at which time she was in her sixty-second year. On the following March she consulted me, and I recommended its removal, but on the recommendation of Dr Smith, of this town, concluded first to try the effects of iodine. I commenced with fifteen drops of the tincture of iodine three times a day, in a little molasses and water, and gradually increased the dose to eleven drops. At the same time the iodine ointment was applied to the whole breast two or three times a day. This treatment was continued for several weeks, and the tumour continued to grow, attended with lancinating pains in the breast and axilla, and it was thought by Drs. Greene and Heywood, of Worcester, and Dr. Smith, of this town, that its removal should be delayed no longer. It was removed on the 29th of May, 1826, by Dr. John Greene, assisted by Drs. Heywood, Smith, and myself. The patient sat in a chair with the arms carried back by an assistant, but otherwise remained at liberty during the whole operation, which she bore with remarkable fortitude. The head rested upon a pillow supported by myself. Two incisions were made in the direction of the axilla and sternum, including sufficient width of skin to make a level surface after the gland was removed, the whole of which was taken away, together with a part of the facia covering the pectoral muscle. The lips of the wound were drawn together with adhesive straps and dressed with simple cerate. This wound healed without any difficulty, and in the usual time.

After recovery from this operation, her health remained as good as usual, until the winter of 1826 and 7, when another tumour appear-

ed just beneath the cicatrix, attended with pains darting into the axilla, as in the first tumour. Similar pains were now felt in the neck of the uterus. No medical treatment was now adopted, and the only reliance was upon the scalpel. It was removed on the 5th of April, 1827, by Dr. Smith, assisted by myself. A simple incision was made, the tumour not being more than an inch in diameter. The wound was dressed with adhesive straps and cerate as before, and the dressings renewed every day. It showed but little disposition to heal, and luxuriant granulations shot up from every part of it, and a very little purulent matter was discharged. Within a few weeks from the removal of the last tumour, two others appeared in the neighbourhood of the wound, increased rapidly, soon ulcerated, united with the granulations, and formed a hemispherical tumour, which was slightly elevated above the surrounding skin, and seemed to rest on a partial peduncle. The centre of the tumour appeared to increase faster than the borders, which were thus made tense and turned in towards the peduncle. The whole surface of the tumour had an exceedingly jagged and angry appearance. It would bleed on the slightest injury, and often without any hurt whatever. The discharge was not now at all purulent, but watery, giving to the dressings a very slight tinge of yellow and rendering them a very little stiff when dry. Whenever this discharge came in contact with the sound skin, it produced an intense smarting, and unless immediately wiped off would excoriate. If the dressings were suffered to remain after they became wet with the discharges, the pain was increased to an insufferable degree, and she was obliged to change them every ten or fifteen minutes during the whole time. The pain in the tumour and axilla had now become exceedingly severe and almost uninterrupted; it was severe but less constant in the neck of the uterus. Death now seemed to be the inevitable consequence of the disease. All the appearances were more unfavourable than heretofore, and she declined having it removed again, from a belief that it would be attended with no better result than before, and that it would only add to her sufferings, which must soon terminate her life. I now wrote to Professor SMITH, of Yale College, whose pupil I had been, giving him a history of the case, with the treatment which had been pursued, requesting his opinion of the case. He replied as follows:—

"*New Haven, Aug.* 11, 1827.

"DEAR SIR,—Yours of the 1st inst. has been received. Respecting your mother's case, I would advise to remove all the tumour at once. I once removed a cancerous breast which weighed seven and a half pounds. Several tumours

arose afterwards in the neighbourhood of the cicatrix, which were removed, and the woman is now living and well.

"After removing the tumours, I would put her upon a vegetable diet, and not allow her to taste animal food for a year at least. I should like to have her live some time on green corn and water. She may boil it or roast it as she likes it best, or she may cut it off the cob and boil it in water and season it with salt and eat it in that way. If you cut it from the cob do it as follows. Take the ear fresh picked, and having a pan of cold water, put the end of the ear on the bottom of the pan, and with a knife cut off the corn and let it fall into the water. Scrape the cob with the knife and plunge it in the water, and wash out all the milk that adheres to it. I have found that a diet of Indian corn is very favourable to cancerous patients.

"I would give the following medicine:—℞. Red oxide of iron, ℥iss.; Ext. conium, ℥ss.; simp. syrup, q. s.—Mix and make twelve pills to a drachm. Dose to commence with three pills morning, noon, and night, and increase the dose to as large a quantity as she can bear on account of the conium. * * * *

"I am, with sentiments of esteem, your friend, &c.

"NATHAN SMITH.

"LEONARD PEIRCE, M. D."

She would not yet consent to the removal of the tumour, but commenced immediately with the diet, which she most rigidly adhered to. The corn was prepared by cutting it from the cob and boiling it as directed. She used the oxide of iron and conium in as large quantities as she could bear.

Drs. Green and Smith were now called, who united with the opinion of Professor Smith in recommending its removal, to which she finally consented, more however in deference to the opinions of her advisers, than from a belief that it would arrest the disease. She now had an attack of the dysentery, from which she did not recover for two or three weeks. During the acute stage of this disease the discharge from the cancer considerably abated, but was not otherwise affected. On the 13th of September she had so far recovered as to be able to submit to the operation. At this time the tumour was larger than the breast, whose place it occupied, and it had for more than two months bled from one to three ounces daily. The skin around the base or peduncle, which was now nearly four inches in diameter, was so diseased as to require its removal to the distance of nearly an inch on each side of it. Her health was very feeble from previous suffering, and much doubt was entertained of her surviving the operation. She was seated in a chair as at first, and supported but not confined by assistants as before. Dr. Greene operated, assisted by Drs. Heywood, Smith, and myself. Two incisions were made, meeting at the sternum and axilla. The tumour was cautious-

ly and with much dexterity dissected from the pectoral muscle which appeared to be perfectly sound and healthy. It was thought that could the lips of the wound be brought together, it would be more likely to heal than it would if a large surface was left uncovered by skin. By considerable effort the lips were brought together, and confined by the interrupted suture and adhesive straps. This put the skin so violently upon the stretch, that her head, neck, and shoulders were drawn obliquely forwards and downwards, which occasioned for a time severe pain. The operation was performed about three o'clock in the afternoon, and notwithstanding the force used in the dressing, she passed the succeeding night more comfortably than she had any night for six weeks before.

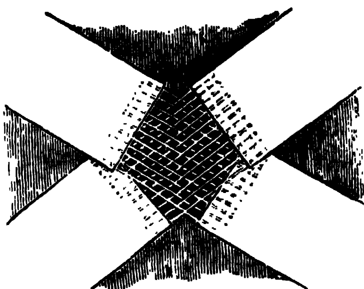
Nothing unfavourable took place to interrupt the healing of this wound, except some slight granulations shooting upon its edges, which were reduced by the daily application of nitrate of silver. It soon entirely healed, and formed a round cicatrix, and the pains in the axilla and uterus had entirely subsided. She had up to this time most rigidly adhered to her prescribed diet, eating nothing but boiled corn seasoned with salt, and drinking nothing but simple and cool drinks. The pills were omitted after the operation. She was fully convinced that she was deriving essential benefit from her diet, and notwithstanding the severe self-denial it imposed upon her, most cheerfully submitted and clung to it as her only hope.

When corn was in a fit state to boil, she had a large quantity of it gathered, boiled, dried in the sun, and laid up for future use. Prepared in this way it would not receive injury by keeping, and retained the flavour of corn fresh picked. On this she subsisted till the next season for green corn returned, when she supplied herself again from the field, and continued its use during the season for it. She then began the use of boiled ripe corn, sometimes boiling it as it came from the cob; at others having it cracked in the mill, and made into homony, which she eat with molasses. She frequently eat, instead of the corn, bread made of Indian meal, mixed with water, and baked by the fire.

She now attempted the use of animal food, by barely tasting it, but was obliged to abandon it at once, as it produced pains in the axilla, similar to those she had felt in the cancer. It likewise made her mouth and throat sore. The attempt was several times renewed at intervals of several months, but always with similar results. Roasted potatoes agree with her well. She occasionally eats fish sparingly. She continues her diet to this time, and most studiously

avoids all kinds of animal food, all kinds of distilled or fermented liquors, spices of every kind, and all hot and heating drinks. Exercise and mental emotions, for a considerable time after the last operation. produced effects similar to those of animal food, and she most sedulously avoided them. She has never deprived herself the use of tea, but always takes it cool, and in limited quantities. From the time she began to diet, the alvine discharges were thin and watery, and continued so long as she confined herself to green corn. They were likewise, for a considerable time, hot and excoriating. Within a few months from the last operation, she was able to sit erect, and had a tolerably free use of her right arm, and its motions are now entirely free. During the time she confined herself to green corn. her strength was so feeble that she was unable to perform any manual labour, but took the general superintendence of her household affairs. After she began the use of ripe corn, and eat bread and other vegetables, her strength increased so much that she was able to do some light work. At present, her health is as good as before she was afflicted with cancer, and she has become so accustomed to her diet. that she enjoys it as well as she would a more generous one.

There have been other cases of cancer in which two or three operations have been performed, and the disease subdued. But from the obstinacy of the disease in this case; its increased violence after the second operation; and from a total inability to resume her former diet, the conclusion seems to be, that without the diet she would never have recovered. Had the diet been commenced immediately after the first operation, I have no doubt but the result would have been equally favourable, and have prevented a vast deal of suffering. Covering the wound with the skin, by drawing the edges together, was undoubtedly a wise precaution against the growth of morbid granulations, and I think should not be neglected in similar cases. It may seem impracticable to those who have not made the experiment, to close an opening of six or seven inches in width, where the skin is no more yielding than it is about the upper part of the chest, and on the side, and abdomen; but by a little bending of the body, with some inclination of the head and shoulder, it may be accomplished without difficulty, and the pain it occasions is but transient. It was done, I believe, at the suggestion of Dr. Greene. The adhesive straps used in the dressings, were the wove ones, which are much the best for wounds of this description, as they permit the discharge of pus. &c. and the renewal of the dressings of cerate without being removed.



The accompanying drawing represents this strap. It consists of four pieces of muslin, united by threads, which interlace in the way shown in the drawing. The figure is about one-fourth the necessary size for the straps. This strap is used by spreading the under side of each part of it with plaster, then place the two under ones upon the sound skin, so that the ends to which the threads are attached may be about three lines from the edges of the wound; then draw the upper ones until the edges of the wound come together, when they are to be pressed down upon the under ones, and this confines the whole.

Sutton, Mass. March, 1831.

ART. IV. *On a New Practice in Acute and Chronic Rheumatism.* By J. K. MITCHELL, M. D. one of the attending Physicians of the Pennsylvania Hospital.

IN the autumn of 1827, a patient affected with caries of the spine. was suddenly attacked with all the usual symptoms of acute rheumatism of the lower extremities. One ankle, and the knee of the opposite leg tumefied, red, hot, and painful, afforded as fair a specimen of that disease in its acute stage as is usually met with. The usual treatment by leeches, purgatives, and cooling diaphoretics, with evaporating lotions, had the effect of transferring the symptoms to the other ankle and knee, and finally to the hip. Disappointed in the treatment, I began to suspect that the cause of the irritation might lie in the affected spine. The difficulty of cure, the transfer of irritation from one part of the lower extremities to another, without any sensible diminution of disease, and the fact of the existence of caries in the lumbar vertebræ, which lie near the origin of the nerves of the lower extremities, rendered probable the opinion, that in the spinal marrow lay the cause of this apparently indomitable and migratory inflammation. Under this impression, I caused leeches to be applied to the lumbar curve, and followed them by a blister, placed on the same spot. Relief promptly followed these remedies, and the pain ceasing to be felt in the limbs, was perceived only in

the immediate vicinity of the spinal curve. After the blistered surface recovered its cuticle, a few leeches placed over the diseased spine removed the pain, and left the patient in the usual state of indifferent health attendant on such forms of spinal disease.

Striking as were the benefits of the applications made to the spine in a case of apparent inflammatory rheumatism, they did not lead my mind at the time, to the general conclusions which, viewing the case as I now do, they ought to have suggested.

In the beginning of the ensuing winter, another case of a similar kind presented itself. A little female patient, having curvature of the cervical vertebræ, was attacked in the night with severe pain in the wrist, attended with redness, tumefaction, and heat. As on the appearance of these symptoms, the pain in the neck, to which she was accustomed, subsided, I easily persuaded myself of the spinal origin of this inflammation, and accordingly applied leeches to the cervical spine, with the effect of procuring a prompt solution of the disease of the wrist.

This case led me very naturally to the reflection that, perhaps other cases of rheumatism might have an origination in the *medulla spinalis*, and depend on an irritation of that important organ. In the following spring an opportunity of testing by practice the truth of this opinion presented itself. William Curran, a respectable livery stable keeper in Marshall's Court, had been for upwards of two years afflicted with a rheumatism of the lower extremities, which gradually deprived him of the use of his limbs, and finally confined him to his chamber. Regular medical aid, and many empirical remedies had been procured, without an abatement of the pain, which became at length almost intolerable.

On my first visit I found him in his room, in a paroxysm of pain. His legs were swollen from knee to ankle, and the enlargement of the periosteum and integuments, gave to the anterior face of the tibia an unnatural prominence. In that place the pain and tenderness on pressure, were particularly developed. He was also suffering severely from pain in the scalp, which had existed for a short time previously, and was at length almost insupportable. Along with these symptoms appeared the usual febrile action with its concomitants.

Notwithstanding the significant hints given by the spine-cases referred to, I treated this case for a time in the usual manner—depleted freely, purged actively, blistered the head, and having caused an abatement of fever, administered corrosive sublimate and decoction of sarsaparilla. Defeated in all my efforts, I at length suggested

to my patient the possibility that his disease was so unmanageable because we had not applied our remedies to the true seat of disease, and that by addressing our measures to the spine, success might yet be found. Accordingly, on the 16*th* of February, 1828, nine days after my first visit, I had him *cupped at the back of the neck*, and as he could not bear any more direct depletion, inserted a large seton over the *lumbar spinal region.* The cupping, followed by blisters to the back of the neck, relieved his head, and as soon as the seton began to suppurate freely, his legs became more comfortable: From the 25*th*, nine days after the insertion of the seton, I visited him but seldom, although I had seen him once or twice a day until that period. Indeed, I paid him but seven visits after the 25*th*. The last was on the 30*th* of March. Soon afterwards he resumed his usual pursuits, and about the beginning of June the seton was removed. Since that time he has not had a return of his complaint, and is at the date of this paper, in the full and vigorous exercise of all his physical faculties.

I could scarcely doubt as to the cause of the cure in this case, because the treatment applied to the spine was that alone which had not already been fully and fairly tried, either by me or those who had preceded me. Indeed, the last applications were made with some hope of success, and the grounds of that hope were expressed to the patient, who was fully persuaded that the spinal treatment was the chief, if not the sole agent of restoration.

No other well-marked case of rheumatism presented itself in my private circle of practice, until in the winter of 1830 Mr. Teale's work on neuralgic diseases reached this country and began to attract towards the spinal marrow a greater share of medical attention. Although in his essay, I found nothing *directly* calculated to sustain me in the opinion I felt disposed to adopt concerning the spinal origin of rheumatism, I rose from its perusal with increased confidence in that opinion, and resolved to experimentally examine its truth. The first *well-marked* case of simple inflammatory rheumatism which subsequently presented itself, was the following:

Robert Gordon, well-known as the carrier of Poulson's Daily Advertiser, fifty-six years of age, of vigorous constitution and active habits, was the subject of the attack. Observing a severe pain in his right heel and ankle, immediately followed by redness, heat and tumefaction, he caused himself to be largely bled and took some salts and magnesia. On the following day the pain and swelling increased, and the ankle and knee of the opposite limb becoming similarly affected, he was confined to bed.

On the 3*d* day my first visit was made. The patient had then a full, strong, frequent pulse, flushed face, dry skin, whitened tongue, and complained much of the severity of the pain in his legs, and of his incapacity of enduring the slightest pressure or motion. As he had already been purged and had used a lotion, I directed the application of seventeen cups to the lumbar region, so as to abstract twelve or sixteen ounces of blood.

Next morning found the pain almost entirely gone, does not complain of moderate pressure, and is able to move his legs without inconvenience. Ordered a draught of salts and magnesia, with an evaporating lotion of camphor in alcohol.

3*d* day, pain in legs scarcely perceptible, but the shoulders, elbows and wrists, are beginning to exhibit marks of severe inflammation, expressed by pain, tumefaction, heat and redness. Ordered twelve cups to the cervical spine.

4*th* day. The patient sits up, complains of stiffness, but no pain except in one wrist, and that very slight. Directed Epsom salt and magnesia.

5*th* day. Finding nothing for which to prescribe, arranged the patient's diet, recommended the occasional use of aperients, and took leave of the case.

Called on the 10*th* to enquire into results, and found that there had been no return of disease.

Since that time a very severe winter has passed, during which the subject of this report has continued in his customary health, and in the pursuit of his usual employments.

The reader will, in the above case perceive, that the general bleeding, though very copious, proved of no service, and that the large local depletion of the lumbar region, benefited solely that part of the disease which lay at the peripheral extremities of the nerves, supplied by the lower end of the spinal marrow. The inflammation in the upper extremities continued afterwards in progress, and was arrested only when cups were placed over the cervical end of the spinal column.

The whole case exhibits a fine exemplification of the difference in the character and extent of the influence of general and topical depletion, and proves that *local blood-letting is most potent when applied to that part of the spine, which supplies with nerves the parts in a state of active inflammation.*

As I feel, in common with the profession, a greater confidence in Hospital reports, especially when made by those who are not by interest or reputation blinded or misled, I shall present the history of

some cases treated after the new method, as drawn up at my request, by Dr. Stewardson and Dr. Norris, the resident physicians of the Pennsylvania Hospital.

The following case, reported by Dr. Thomas Stewardson, is peculiarly interesting, because of its evident dependence on *irritation of nervous masses*, and the immediate and perfect remedial action of the local applications.

Case I.—William Anderson, coloured man, a seaman, aged fifty, was admitted into the Pennsylvania Hospital on the 31*st* of December, for a chronic rheumatism of upwards of five years duration. Occasionally the disease intermitted, but generally continued to affect him during the cold season. The pain affected at one or at various times, almost every part of his *right* side from head to heel, but had in no case at any period, crossed to the opposite side. Like other cases of chronic rheumatism, it was most severe in cold weather, and when warm in bed. According to his statement he seldom suffered from a winter attack for a less period than three or four months, and the existing exacerbation had lasted only a few weeks.

On the 2*d* of January, two days after his admission, eight cups were applied to *the back of the neck* and *left side of the head*, and a powder was taken, consisting of guaiacum and nitrate of potassa, of each ten grains, with directions to repeat it three times a day.

On the 3*d*, "pain in the *head* and *arm* completely gone—*leg* no better."

On the 4*th* as on the 3*d*.—A blister to the nape of the neck, and eight cups over the lumbar spine.

On the 5*th*.—"Says the cups almost immediately relieved the pain in his *leg*. He now feels perfectly well."

On account of the extreme rigour of the season, the patient was not discharged until the latter part of February, during which period he remained entirely free from disease.

Case II.—Jane Black, aged sixteen, was admitted into the Hospital on the 9*th* of March, 1831. About four weeks antecedently, she perceived pain, tumefaction, and a sense of *numbness* in her feet and ankles, which gradually deprived her of locomotion; and on the third or fourth day, confined her to bed. On the second day after the attack, her wrists and hands were similarly affected. In the course of a week her wrists, fingers and ankles, became flexed and rigid, feeling pain from every attempt to straighten them. Such

was her condition when admitted. She states that she is of a costive habit, and had been amenorrhagic for two or three months before the appearance of rheumatism. The previous treatment consisted, as she said, of a blister to the *umbilical region*, and some powders and drops. On her admission, Dr. Norris applied six cups to the cervical, and six to the lumbar spine, which "took away entirely the *pain*."

On the following day Dr. Otto saw her, and recommended a continuance of the treatment, and accordingly four cups were applied to the upper, and four to the lower part of the spine, with the effect of enabling her to extend her wrists, and to grasp, though imperfectly, with her hands.

On the 11*th* took Epsom salt.

On the 13*th* spine cupped as before, and a dose of magnesia directed. After the cupping to-day, she begins to observe a "pricking sensation, as if her feet and hands were *asleep*."

On the 16*th*, cups as before.

On the 18*th*, find her free from pain and tumefaction, recovering gradually the use of her hands, experiencing no uneasiness on motion or pressure. She is unable to stand, because her feet "slide from under her;" but the attempt gives no pain. Besides the remedies already mentioned, soap liniment was applied twice a-day to her wrists and ankles.

Remarks.—In this highly interesting case, the complication of rheumatic irritation with *numbness*, and enfeebled condition of the extensors of the hand, and the congeneric flexors of the foot, amounting almost to paralysis, emphatically directs us to the centrally nervous origin of this disease.

Case III.—"William White, seaman, aged fifty-two, was admitted November 27*th*, for rheumatism. He stated that he had an attack in the preceding winter, which had confined him to bed for five months, and that the present affection had commenced with equal severity. On admission, his wrists and arms were tumid and painful, and he complained also of pain in the *lumbar region* and lower extremities. Cups were applied to his spine, and repeated at proper intervals, two or three times, without the use of any auxiliary remedies. The relief was almost complete, when in consequence of some accident, he was affected with fever and pain in the head, for which he was cupped and blistered at the nape of the neck, and a saline purgative given. Being relieved from the cephalic irritation, he began in a few days to complain again of pain in the feet and

ankles, which appeared hot and tumid. Cups having been applied to the base of the spine, entire exemption from pain ensued. The severity of the season prevented his discharge until the 26*th* of February; but for more than a month before, he had ceased to feel any other inconvenience, than a very slight soreness on the top of his feet, and that only when walking. That pain left him previous to his discharge." This case is reported by Dr. Stewardson.

Case IV.—"William King, a seaman, was admitted for a surgical disease, for which he used venesection and low diet, followed by balsam of copaiba and cubebs.

"On the 24*th*, he was seized with severe rheumatic pain in his left side and shoulder. For this he was twice bled largely, and put under the use of sarsaparilla and nitrous powders, and afterwards of Dover's powders. A stimulant liniment was also applied to the affected part. Under this treatment he remained until the 6*th* of February, when the pain appeared to be fixed in both the side and shoulder, and he had not been benefited in any way by the remedies employed.

"On the 7*th* of February, all other remedies being discarded, twelve cups were applied to the spine.

"8*th*, pain relieved. Cups to be reäpplied.

"11*th*, patient states that the last cupping has almost entirely removed the pain from his shoulder, but has not benefited that of his side. Ordered eight cups to dorsal spine.

"13*th*, no change after last cupping. Cups to be again applied.

"16*th*, the pain in the shoulder left the patient soon after the application of the cups on the 13*th*, and has not returned.

"As the pain in the side was confined at last to a small surface, and had been constant for some time, a few cups were applied immediately over it, with beneficial effect. Their repetition at length entirely removed it." This case is reported by Dr. G. Norris.

Remarks.—The practical interest of this case consists in the total failure of the most judiciously selected remedies of the current practice, and the facility with which the disease, so obstinate before, began to yield to the *very first* application of cups. To those who still maintain the identity of the effect of general and topical depletion, this case presents a striking difficulty.

Case V.—"William Brown, seaman, was admitted March 5*th*, 1831, for rheumatism. Three months ago he was exposed at sea to great hardships in an open boat. On the day after he was picked up,

he felt pain in his shoulders and elbows, which remained until after his arrival in port, and then suddenly attacked his lower extremities, while entire exemption from pain was experienced in his upper ones. On admission, he complained of pain in the whole course of his legs, but finds it particularly severe in his knees and ankles. The right ankle is swollen, hot, and very painful. Directed the application of ten cups to the *small of the back.*

"March 6*th.* Is no better.—On examination, I found that the cups *had not been placed on the part as ordered,* but had been extended to the top of the spine. Therefore ordered another cupping to the loins.

"7*th.* Was relieved by the cups for a time, but the pain has returned. Cups to be repeated.

"8*th.* Has had very little pain since the last scarification. The tumefaction of the right ankle has disappeared, and the heat and pain have entirely gone from it.

"On the 11*th* and 13*th,* in consequence of the reappearance of slight symptoms of the disease, cups were ordered. Their application in both instances afforded relief." Reported by Dr. G. Norris.

Remarks.—In the case just recited, the attention of the reader is called to the fact, that the cups produced no relief whatever when applied over that part of the spine which did not transmit nerves to the seat of inflammation, thus verifying the important doctrine, that the most potent influence is exerted, when our *depletory* remedies are addressed as nearly as possible to the *disease exciting agent.*

Case VI.—"Thomas Gordon, a man of colour, a seaman, aged thirty-four, was admitted on the 15*th* of February, for *rheumatic fever.* The pain is confined *chiefly to his limbs,* and his pulse, although excited, is not very active. Ordered ten cups to spine.

"17*th.* No improvement. It is discovered that the cups had not been placed near the spine, but at a considerable distance on each side of it. Ordered ten cups to *dorsal spine.*

"18*th.* The pain in his body and arms diminished, but no improvement observable in his lower extremities, in consequence of which eight cups were applied to the *lumbar* portion of the spine. For a slight cough, some mucilage was ordered. The patient was relieved by the last cupping, and the pain *almost entirely* left him. For stiffness in his legs, a stimulant liniment was finally directed.

"On the 1st of March, having been previously apparently cured, his disease suddenly returned. As he had along with other symptoms of fever, a strong and frequent pulse, sixteen ounces of blood were

abstracted, and nitrous powders administered—but as on the following day, no abatement of the pain of the lower extremities appeared, and though the fever was reduced, eight cups were applied to the lumbar spinal region, which *entirely relieved him.*

"On the 9th of March, he was discharged cured. After the last scarification, he used for stiffness and weakness of his joints, a stimulating liniment."—Reported by Dr. Stewardson.

Remarks.—In this case several facts are worthy of notice. Twice the cups failed to relieve the *lower extremities*, once because they were not applied to any part of the spine, and once because they were placed on the *dorsal region*. The very first application to the lumbar region afforded the expected benefit. In the relapse, a large bleeding and nitrous powders sustained a total failure, while a very moderate quantity of blood drawn from the lumbar region by cups, produced an immediate and final solution of the disease.

Case VII.—"William Richardson, a seaman, was admitted, on the 11th of February, for rheumatism. His attack commenced two weeks before, with pain in the dorsal region and occiput, followed by a *sense of numbness*, with pain in almost every part of his body. On admission his skin felt cold, his pulse was frequent, tongue slightly coated, and his bowels regular.

"*12th* of February. Twelve cups were applied along the spine.

"*13th. Has no pain*, slight numbness of the legs; no appetite: slightly vertiginous; directed him an ounce of sulphate of magnesia.

"*14th.* Nausea, for which ordered effervescing draught. For the numbness, directed soap liniment.

"*15th.* No improvement: the numbness of his hands being especially disagreeable, a few cups were applied to the nape of the neck.

"*17th. Find the patient free from pain and numbness.*

"For an enlargement of the spleen this patient remains in the hospital, but has not had any relapse."—Reported by Dr. Stewardson.

Remarks.—The most remarkable feature in this case is the concomitant numbness, and the greater difficulty of removing that than the pain, a fact which is not unfrequently observed in cases of rheumatism. The vertiginous affection too, is interesting as significant of the irritation of central nervous masses.

Case VIII.—"Rebecca Leshler, affected by rheumatism of two weeks duration, exhibited a swollen arm and shoulder, attended with pain and redness. She could elevate her arm only when firmly

grasped by the hand of an assistant, when the motion became comparatively easy.

"In the evening of the 5th of March, ten cups were applied so as to extend from the top of the neck downwards, immediately over the spine. On the following morning, the pain was gone, and on the subsequent day every vestige of redness and swelling disappeared. *No other treatment was used.*"—Reported by Dr. Stewardson.

Although other cases might be cited in confirmation of the views here taken, I have not leisure at this time to digest and arrange them. At no very distant period I hope to be able to bring the subject more fully before the profession. I may observe in general, that, as far as I now recollect, only two cases of apparent rheumatism, have in my hands, either in private practice, or in the Pennsylvania Hospital, resisted the treatment recommended in this paper, and both of *them* were in reality *neuralgia*, and exhibited no traces of inflammation. One of them was an affection severely painful, located in the bottom of the heel, the other was gastric and intercostal.

The preference given to local depletion over other local measures, arose from the greater apparent success and promptness of its action, which scarcely left any thing to be desired: but cases will occur in which other measures must be used, and in which, perhaps, all measures will fail. We are warranted, however, in declaring our conviction, that few failures will happen in thus treating *acute* rheumatism, and that success will diminish, as passing through *chronic* rheumatism, we enter on the ground of *neuralgia*, a disease which sometimes spontaneously disappears; but is scarcely ever, in this city, cured by merely *medical* means. The art of the surgeon occasionally subdues it, and the physician often allays, but seldom removes it. Being paroxysmal, and often slumbering for weeks or months, it is not unfrequently mastered in appearance, though seldom cured in reality.

ART. V. *Observations on the Use and Advantages of the Actual Cautery, with Cases.* By ALEXANDER E. HOSACK, M. D. (Read before the Medical and Philosophical Society of New York, Jan. 1831.

IN the present communication, I beg leave to offer to the Society, a few observations upon the use and advantages of the actual cautery, and to enumerate the circumstances under which it seems to possess claims superior to those of any other remedial application.

It appears to have been in use from an early age, and travellers in Africa relate that it is still principally depended upon by the Arabs of the Great Desert, in the inflammations of the brain to which they are so liable. Among surgeons it has varied in estimation, like every other remedy, but has of late been much employed in Europe, and has almost entirely superseded the use of the chemical caustics, having been found to act with more certainty, and in a shorter space of time; often indeed has it evidently arrested the progress of the most formidable disease.

It has been used for the destruction of diseased or poisoned parts —for producing a salutary irritation where the tone of the part has been too much lowered—as a counter-irritant for the transfer of inflammation—as a means of arresting hæmorrhages, in which, however, I must confess, that my own experience has not confirmed the statements of others.

The particular cases in which I have seen it attended with the greatest advantages, have been, in the prevention of hydrophobia and the destruction of fungous growth—in old and atonic ulcers, necrosis, caries, hospital gangrene, and cancer—in imparting vigour to the integuments surrounding enlarged joints—as a counter-irritant in catalepsy, epilepsy, inflammations of the brain, &c.

There are two means of cauterization—

First, the hot iron, which should always be brought to a *white heat*, and applied immediately when taken from the fire.* The desired effect is then produced with more certainty, and infinitely less pain. We are in no instance to suppose that the degree of irritation produced will be only in proportion to the heat of the instrument; it will depend entirely upon the *time* employed in the application, which should be regulated accordingly. In some cases, as of chronic enlargement of the joints, where the source of diseased action is far from the surface, and concentrated within the articulation itself, it is necessary to make incisions through the skin and subjacent cellular structure, previous to the employment of the cautery; it will thus sometimes happen, that the heat imparted will invite a flow of blood to the wound, and thereby cool the instrument; in order that the object of the application be not thus defeated, several others should be kept hot, and applied in succession if required.

Secondly, by the *moxa*, which can however serve only as a coun-

* A small portable furnace, or large chafingdish, with charcoal, which may be brought to the bed-side of the patient, offer the most convenient means for this purpose.

ter-irritant. A detail of the minutiæ necessary to be observed in either application, would employ too much space, so I must refer the reader to the *Memoires de Chirurgie* of Baron Larrey, where they may be found.

In wounds inflicted by rabid animals or poisoned instruments, the actual cautery seems to me absolutely indispensable, and during my residence in Paris, I repeatedly witnessed its successful application as a preventive. Eleven persons bitten by dogs affected with hydrophobia were admitted into the hospitals of the Hôtel Dieu and Charité; the wounds were generally very slight, scarcely more than punctures which are of all others to be dreaded. Immediately on their arrival the wounds were seared and the discharge kept up by irritative ointments. Three of the number died in agony, with all the horrors of hydrophobia, the others were not attacked to my knowledge —a proportion less fatal than that from any other report I have yet seen.

The bite of a poisonous serpent, like the rattlesnake, is generally so instantaneous in its effect, that there is less hope of success from any local treatment, yet excision followed by cauterization should always be resorted to. On the other hand, the symptoms of hydrophobia frequently do not become manifest for months after the infliction and even the healing of the wound. Whether the poison still lurks in the vicinity of the cicatrix, or requires time for its elaboration in the system, we know not. The continental surgeons, however, recommend cauterization, in all cases where danger may be apprehended, considering the pain inflicted as more than recompensed by the additional security afforded against a disease so dreadful and hitherto incurable. The injured part should be freely laid open, and the iron applied until the irritation shall have extended for some distance around. The wound thus produced should be dressed from the bottom, and kept in a state of suppuration for a length of time by digestive ointments.

In cancerous and fungous ulcerations, the obnoxious part should, if prominent, be first removed by the knife, but when only beginning it may be sufficient to sear it. In sluggish ulcers, its effects are more certain than those of any other irritant; I will relate one case. An aged gentleman had been long afflicted with an ulceration on the great toe, immediately above the extensor tendon, which, from his years, and the imperfect circulation of the part, I had reason to fear might lead to dry gangrene. A fair trial was given to the common escharotic remedies, such as the kali purum, lunar caustic, &c. the sloughs from which separated in the usual time, leaving the ulcer in

its former indolent state. It being then clearly evinced that these erosive remedies only extended instead of contracting the ulceration, I determined to employ the actual cautery, a single application of which produced a complete cure, without otherwise interrupting his general health.

In some instances of atonic ulcer, the hot iron may be advantageously used without actual application to the body, as when the surgeon does not conceive a destruction of the part necessary, the granulations having arrived at the surface, but that surface appearing white and inactive, requiring some stimulant to excite the healing process. Great benefit may here be derived from the gradual approach of the heated iron to the part, and its continuance near it for a short time; the surrounding surface will immediately redden, become injected with blood, and pain will be produced. When the iron has been removed, the healthy portion will resume its former appearance, while that affected will continue in the state of irritation so necessary for its cure. The surgeon must, however, not be disappointed, if the ulcer return to the same passive condition, which he should consider merely as a call to repeat the application; his efforts will most generally be crowned with success after the second or third trial.

Before I proceed to the use of the actual cautery in caries and necrosis, I will offer a few observations upon the pathological difference between these two diseases, as influencing their surgical treatment, which has not I think been fully noticed.

The nourishment of bones; and their regeneration when destroyed. is effected by means of blood-vessels penetrating their interior, and proceeding immediately from the membranes spread over their surfaces. The spongy portions are the most highly animalized, and admit of a free circulation, while the cylindrical and flat bones, being more compact, can only be penetrated by very minute vessels, and therefore require a greater surface of membrane in proportion to their mass. Accordingly we find all such portions as it were interposed between two membranes which communicate with each other through the substance of the bone itself by means of small vessels. This communication is proved to be necessary to the vitality of the bone, by this fact among others, which has been particularly noticed and applied by Pott and Mr. Abernethy. Whenever matter has been formed or blood extravasated between the skull and dura mater, separating the latter from the former, the external table immediately becomes white, and when scraped will yield no blood; so universal is this occurrence, that the distinguished surgeons above mentioned consider it as an infallible symptom of a compressing cause immedi-

ately beneath, and as warranting the perforation of the skull in that spot for its removal.

Now, were it possible for a patient to exist under such circumstances, we might reasonably expect that the bone would *die*, and a similar suppuration and detachment take place between it and its exterior covering—here we should have a complete necrosis, for in that manner is the disease always formed when it occurs, as in the tibia for example. An inflammation takes place in the periosteum, matter is formed underneath, and detaches the covering from the bone. The internal membrane is also affected in a similar manner, and the bone being thus insulated from all means of support, necessarily perishes.

The separation of the membrane on one side may cause a corresponding detachment of the other, either because there is an alternate inosculation of the arteries in one with the veins in the other, or because the number of vessels incapable of enlargement from mechanical reasons is insufficient for the nourishment of the bone, which therefore dies before the second separation takes place. In cancellated parts the circumstances are very different; their vessels are comparatively large, forming strong bonds of connexion with the periosteum, and they are therefore endowed with superior powers of vitality. Hence necrosis seldom or never takes place in them; but on the other hand, they are liable to inflammation and its consequences, suppuration and mortification, which may go on to a considerable extent, without any very great change either of the periosteum, or of the adjacent parts of the bone itself. In necrosis there is often a regeneration of bone, the dead portion being thrown off in mass as a foreign substance. In caries, this cannot take place, and a part destroyed can only be supplied by the deposition of purely animal matter. These differences should be borne in mind by the surgeon, as they materially change the indications of treatment.

The use of the actual cautery in caries has been most strongly recommended by Baron Larrey, who has advanced numerous facts confirming the use particularly of the moxa as a counter-irritant. Were it possible to apply the hot iron immediately to the seat of the disease, our prospects of success would be doubtless much increased by this change of atonic and sluggish ulceration to the comparatively healthy condition produced by a burn; but such practice is generally impossible, from the situation and delicacy of the affected part, as of the vertebræ, where it often occurs. In the forming stage of necrosis, that is, where there is merely inflammation of the periosteum, the actual cautery applied at a short distance from the part affected will prove a most efficient counter-irritant; but as the surgeon is sel-

dom consulted until matter has been formed, the disease being generally at first mistaken for rheumatism, a different course must be pursued, the object is to turn to stimulate and rouse the depressed vital powers of the bone and internal membrane, for which purpose the actual application of the hot iron to *the bone* is in fact the only means. It is to be remarked that necrosis generally occurs in young subjects, while caries is almost entirely confined to those of more mature age, and fortunately, as the power of reproducing bone in place of that which is dead is more easily accomplished in the former than in the latter. Indeed, in the adult, the limb would be almost necessarily sacrificed. I will relate a case from my own practice, in which the treatment recommended above proved successful in arresting necrosis and eradicating its cause.

Mary F——, aged eleven, for some years laboured under an extensive necrosis of the tibia, accompanied by a profuse discharge of matter from several openings in the leg. Her constitution being much impaired by so inordinate a drain, I removed the dead portion: new bone was deposited, her health improved, and the wound in due time was healed. Before this took place, however, a fluctuating tumour, more than an inch in diameter, arose on the other tibia, which she informed me was precisely similar in pain and appearance to the commencement of the former disease. From her account, and from the coïncidence of the symptoms with those already confirmed by observation, I perceived that necrosis was about to take place, and determined to prevent it if possible. No opening being yet established, an incision about an inch and a half in length was made obliquely across the tibia, and another of the same extent intersecting the first at right angles. As I expected, the matter lay between the periosteum and the bone, which was therefore at once laid bare. Each angle of the wound was then turned back with care, and the whole bony surface seared with the *white hot iron*, it being unnecessary to touch any other part. The wound was then filled by a ball of lint, upon which olive oil was poured for the purpose of lessening the pain. In a few days healthy granulations appeared, the seared surface of the bone separated itself by exfoliation from the subjacent part, and the wound healed in the time usually required for burns. Her constitution has since been improving, she has grown considerably, and has every prospect of enjoying a happy existence.

The vast importance of counter-irritants in diseases of the brain and nervous system is too well established to require any argument to enforce their use. Here also the actual cautery is principally used, but I must observe that it has been productive of injurious, nay fatal

results when carried too far, by producing inflammation of the cerebral membranes; however, such cases occur so rarely, that they have raised no prejudices against the practice in France and Germany.

Its employment in tetanus in conjunction with the usual sedatives is sanctioned by experience, and by the established principles of pathology. Thus, for instance, a wound is received in the hand, and an inflammation takes place in the nerves, extends to the medulla spinalis, which is then sound and the only medium of communication between them and the sensorium. The whole nervous system becomes irritated, and a spasmodic action of the muscles, beginning with those of the jaws, is established. The most active treatment is now required, and of all others the sedative has hitherto proved the most efficacious, assisted by counter-irritants, such as blisters applied along the spine near the source of the nerves primarily affected. The hot iron offers the most certain and instantaneous means of producing the latter results in cases where time is so precious. In the incipient stage of the disease the milder treatment may indeed succeed in arresting its progress, but when once tetanus has been unequivocally manifested, we should no longer delay the application of the cautery.

I will cite a circumstance attending a case of catalepsy which fell under my own observation, strikingly illustrating the advantages to be expected from this treatment. Oswald H*****, now about twenty-two, has been afflicted with this disease from the age of puberty. The fits increasing constantly in frequency and duration, threatened to undermine his intellect and produce mania, the general termination of this class of affections. The disease having resisted all palliative means, it was not judged proper to interrupt his advance to manhood by medical treatment; therefore little else remained than the guarding his person against self-violence during the severity of the attack. In one of the paroxysms, however, it happened that he fell into the fire with his head directly against a hot iron, which burnt him severely. For some time succeeding this accident, the fits were entirely suspended, and hopes were entertained that they had ceased to occur: these hopes were, however, soon blighted by their reappearance when the wound healed.

For opening psoas and lumbar abscesses, the use of the cautery has been revived in Europe from the neglect into which it has for so many ages fallen. From the accounts which I have examined it does not appear to have answered the expectations formed, and I have never myself seen its advantages fairly tested. The reader may consult the article Abcés by Roux, in the Dictionnaire de Medecine, Tome premier, page 64.

'In obstinate fistulous openings as sometimes occur after lithotomy, great benefit may be expected; we should, however, in these cases take care to protect the sound parts from injury, for which purpose the dilator for the rectum as constructed by Weaver of London, or the common cannula may be used.* It is also recommended by surgeons of eminence for arresting hæmorrhages in cases where the vessels cannot be tied, or where the discharge proceeds from a large surface, as after the amputation of a breast, and in recesses of the bony structure of the antrum, but in no case have I witnessed its successful application; it seems on the contrary always to invite an additional determination to the part from the rapidity with which inflammation is thus produced.

New York, January, 1831.

ART. VI. *Account of the Epidemic Scarlatina Anginosa, which prevailed at Pittsburgh, Penn. in* 1830. By D. CALLAGHAN, Licentiate of the Faculty of Physicians and Surgeons, and Member of the Faculty of Medicine of Glasgow, and President of the Pittsburgh Medical Society.

SCARLATINA ANGINOSA appeared in this city in the month of May, 1830, and continued to January, 1831, extending its ravages throughout the entire mass of the population. Few families have escaped its visitation, and many have to lament the loss of one or more of their juvenile members. The crowded and ill-ventilated sections of the city suffered most—hence the poor, as in most other epidemics, have been the principal sufferers. The disease was for the most part confined to children from one to ten years of age. It commenced with the setting in of the warm weather, about the middle of May, the thermometer ranging from 50° to 72°, with southerly winds and frequent showers. The first characteristic symptoms of the disease. were general lassitude, want of appetite, hot skin, furred tongue, pain in the head, pain in the small of the back, nausea, lips dry, teeth encrusted, swelling of the tonsils, hoarseness, slight cough, difficulty of deglutition; about the second or third day the cutis covered with a scarlet-coloured eruption, restlessness, thirst,

* I would refer the enquirer for instruments, advised and proper for such operations, to George Teiman, manufacturer of surgeon's cutlery, No. 35, Chatham street, New York.

pulse varying from 100 to 140, sometimes fluttering and irregular, eyes suffused, rigidity of the muscles of the lower jaw, indistinct articulation, drink returning by the nose, in some cases ulceration of the tonsils, delirium, inability to bear the light, swelling of the extremities, followed by pneumonia, but more frequently coma, dilated or contracted pupil, rigidity of the muscles of the back, head bent backwards, convulsive action, and death. In some cases the symptoms were marked with violence from the commencement, and in others the disease was so slight as to require little else than the domestic prescription of families.

This disease, although usually classed among fevers of the continued type, yet had its alternate periods, a remission in the morning and a still more distinct exacerbation in the afternoon. The duration of the disease was various, from five to twenty days, its violence generally expending itself during the first twelve days. Not a few of the fatal cases were carried off within this period, and some so early as the second, third, and fourth days from the first attack. With the increase of temperature in the month of June, the disease became more unmanageable and fatal. This held good throughout July and August, the disease increasing both as to numbers and mortality, as we approached the tropical heat of summer. The thermometer ranging frequently above 90°, and occasionally rising to 96° in the shade with southerly winds and dry weather. Vegetation suffered severely, the grass of the fields was burned up, and the average crop of corn was much diminished from want of rain. The disease now spread over several sections of the surrounding country, but with comparative mildness. After passing the autumnal equinox, inflammation and swelling of the tonsils became more severe, and as the cold weather of the latter end of autumn set in, this symptom continued to increase.

The first premonitory signs of the disease now were hoarseness, difficulty of deglutition, and inability of articulation. Severe and active inflammation of the throat, great enlargement of the tonsils, and high febrile action of the general system, of a distinctly inflammatory type. In short, all the characteristic symptoms of cynanche tonsillaris were well-marked. A great many adults now became affected with the disease, mostly under thirty years of age, and females were more liable than males. No fatal case has come to my knowledge among adults. In them the cuticular eruption was much less distinctly marked, and most visible on the legs and arms. The extremities were slightly swollen and red, as if from exposure to a cold frosty wind, exhibiting a high degree of vascularity all over the cutis.

In a large majority of cases, as well in those that terminated fatally as in those which recovered, the cutaneous eruption exhibited very different appearances. The only permanent feature was the scarlet colour of the skin. In some we had a papular, and in others a miliary eruption, giving rise at one time to the report that measles had broke out among us, and at another that the small-pox had returned. In some there were a number of red circular spots over different parts of the body, assuming a livid appearance previous to death, and a mahogany colour afterwards. This, with the ulceration of the tonsils, which frequently took place, gave rise to the idea that the disease occasionally assumed a putrid character. The glands of the neck frequently swelled and suppurated, particularly in adults, after the cold season set in. In children, swelling of the parotid glands was a common symptom, but suppuration rare. Pneumonic affections were produced in many cases during the cold weather, and several children were cut off from this cause. But of all other causes of death, cerebral affections were the most numerous; congestion of the brain, inflammation of its meninges, terminating in many cases in effusion. In no case was there any post mortem examination; in few cases was it asked, and in those few not permitted.

With regard to the contagious or non-contagious nature of this epidemic, the usual process of reasoning, substantiated by facts, might be adduced on either side. One child in a family caught the disease, and all the others took it in succession. On the contrary, one or more in a family took it, and the others, intermingling with them in every possible way, escaped. Hundreds took the disease who were not within reach of any one of the affected. Persons visiting their relations ill of the disease, returned home and took it, others under similar circumstances had it not. My own opinion is that it was not contagious.

The disease was engendered in, and propagated by the atmosphere. and neither transferred nor transferable from one individual to another. What constitutes that particular state of the atmospherical fluid, capable of giving origin to this particular disease, we cannot say, all we know are its effects. Our best constructed eudiometers throw but little light on this subject. Numbers becoming affected in succession in any particular family or neighbourhood. is only proof of similarity of exposure to the original exciting causes of the disease, and susceptibility of constitution to be acted on by these causes.

During the months of September and October the weather remained dry and warm; in November we had some rains, with southeasterly winds, and warm weather for the season. December set in

with rains, but we had little like winter weather until the latter end of the month; the winds more easterly. Early in January the winds veered about to the north and north-west, the thermometer sunk rapidly to below the freezing point, in a few days it fell to seven degrees below zero. Towards the middle of the month we had a shift of wind to the north-east, with the heaviest fall of snow that has been experienced for a number of years; January 20th it was from two and a half to three feet deep on the level, the thermometer at and below zero, with the wind at north-west. The permanently cold weather gave the first check to the disease. Numbers of adults now labouring under cynanche tonsillaris with a high degree of inflammatory fever.

The treatment consisted in the first stages of the disease, in the detraction of blood either generally or locally, or both, the evacuation of the primæ viæ by emetics and purgatives, with the cold affusion, cold bath, or sponging the surface of the body with cold water and acetic acid.

In many cases during the summer months, such was the state of apparent debility before medical advice was required, that the utility of general bleeding was doubtful. In these cases the application of leeches to the head and neck was of signal service. With this useful animal we were but scantily supplied, and I do believe that many lives were sacrificed, not only from a want of them, but for want of a general knowledge of their utility.

After bleeding, the use of as much of the sol. tart. antimonii as would produce an emetic effect, and the cold applications were recommended, followed by purgatives of the sub-mur. hydrargyri in the younger children; and in the elder in combination with some of the vegetable purgatives or neutral salts. Soda water was given for drink, and the temperature of the surface kept down by continued sponging. The head was ordered to be shaved, or the hair very closely cut, and kept constantly covered with a single fold of linen wet with acetic acid and ice-cold water. In many cases the fond affections of a mother for the golden locks of her darling, placed an insuperable barrier to this part of the treatment, and ultimately endangered, if not sacrificed the life of her offspring. In several cases there was a tendency to diarrhœa with fetid evacuations; purgatives were as necessary in this class of patients as when the bowels were torpid; sub-mur. hydr. combined with pulv. rhei was used generally. If the affection of the throat was slight, an embrocation of equal parts of spt. terebinth., aq. ammoniac, and ol. olivar. was recommended; if severe a blister was applied immediately. Inhaling the steam of warm water

and acetic acid was also advised. A diaphoretic at bed-time of pulv. ipecac. et opii, soothed the patient to rest, and procured a relaxation of the exhalent vessels on the surface, which moderated the febrile action. The mouth and fauces were directed to be washed or gargled with the sol. sulph. aluminis, and a few drops of aromat. sulph. acid. On the first symptoms indicating the approach of coma, a blister was applied to the head or the nape of the neck, extending along the spine, or both; the lower extremities immersed in warm water, and the pulv. antim. c. phos. calcis, or the tart. antim. combined with nit. potassæ, given internally. Enemata were of signal service in evacuating the lower bowels and moderating the febrile action. Some practitioners, led away by the theories of the older authors, and parents by prejudices ascribable perhaps to the same source, in some cases imagined the disease to assume a putrid tendency, and exhibited during the violence of the febrile excitement, wine, cort. cinchonæ, and yeast. To say the least of this practice, it was prescribing for a phantom, and exhibiting a poison.

John Burns, C. M. Regius Professor of Surgery in the University of Glasgow, notwithstanding all his practical acumen and extensive experience, both in his public lectures and in his writings, has inculcated the idea that scarlatina is a contagious disease, (vide Principles of Midwifery, page 542.) I have seen it prevail extensively in Europe in the most crowded populations, and I have seen it here, and must confess I never saw any thing to warrant such an opinion. The numbers which have been cut off in this epidemic must be considerable, but as no records are kept, we can give no account of the amount. Recoveries were often lingering; in many cases the sulphate of quinine acted as a valuable tonic, in restoring to an enfeebled frame the wonted vigour of health.

Pittsburgh, 1831.

Art. VII. *Topographical Remarks on the Climate, Soil, &c. of the middle section of Alabama, more especially in Relation to the County of Dallas.* By J. W. Heustis, M. D. of Cahaba.

CAHABA, the chief town of Dallas county, is situated in about 32° 20″ of north latitude. The Alabama river runs through the county, dividing it from north to south. The Cahaba river also passes partially through it, mingling its waters with those of the Alabama, at

this place. There are besides, several creeks of considerable size, the principal of which, are Bogue, Chito, and Cholatche; the former is nearly one hundred miles in length, by the way of its meanderings, the latter is much smaller, and forms the southern and western boundary of the county.

This is a lime stone county, and particularly so in the vicinity of the prairies, of which there are some of very considerable extent in this and the adjacent counties: in many places it is moderately broken and undulating; never, however, rising into lofty hills, but abounding in precipices and caverns. The substratum is composed of mountain, or transition lime stone, softened, in most instances, by a considerable admixture of clay, and in others indurated by the presence of silica; the former, or soft lime stone, is by far the most common. About sixty miles above this place, the country becomes very broken and hilly, the lime stone assuming more of the primary character, and is mixed with a considerable proportion of sand stone; in every place the latter mostly prevails. This is considered as the latitude of the golden region, and discoveries authorizing this character have lately been made. A silver mine is also said to have been discovered upon the Cahaba river, about seventy-five miles above this place: the disclosure was made by an old man, who had been employed to work in the mine by the Spaniards, more than fifty years ago. Iron ore is here also common; beds of coal may be seen in the banks of the Alabama, at low stages of the water, embedded beneath a deep stratum of lime stone. This section of country is of alluvial formation. Jasper and pebbles of various descriptions and sizes are found in great abundance upon sandy and gravelly ridges, and in the banks and beds of the rivers and smaller streams. Too little attention, however, as yet has been paid to the subject in this state, to ascertain the extent and value of its mineralogical treasures. The rivers and creeks have generally one of their banks composed of lime stone, and the other of more recent alluvial deposite.

There is in this county a very considerable proportion of fertile land, confined principally to the rivers, creeks, and prairies: the upland in other situations is generally thin and sandy, yet when of moderate fertility, it is often preferred on account of the purity of the water, and healthfulness of situation, to the less salubrious though more productive lands near the rivers. Perhaps there is no country possessing a greater variety of soil, and in which sudden changes take place more frequently from fertile to poor, and *vice versa;* or in common parlance, where the land is more spotted: not unfrequently a space or strip of a few yards constituting the boundary between lands

of very poor and of very rich quality. It would seem, that with the exception of the more recently formed rich river lands, this great and sudden variation in the soil is owing, in a considerable degree, to the depth or proximity of the subjacent lime stone to the surface. There can be little doubt that this lime stone possesses the property of great fertility. Thus, when the *bald prairies*, so called from being destitute of trees, and covered only with grass and herbage, when these have been cultivated and broken up deep, with a strong plough and team, by which the lime stone becomes pulverized, and converted into mould: these places, which before were barren and unproductive, are converted into soil of great fertility. In this way, also, we may probably explain the richness and depth of soil along the skirts and margins, and in the bottoms or hollows lying in the vicinity of the lime stone, or bald prairies, prominences, and hills; the wear, attrition, and decay of ages absorbing the lighter parts and portions of this calcareous animal deposite, which, mixing with the remains of extinct and decaying vegetation, lodges upon the sloping declivities, and in the vallies, forming beds and strata of great depth, fertility, and duration. The land not only of this county, but also of most others in the state, may be divided into six natural varieties, or classes. First, the side river bottoms, or swamps as they are called, subject to inundations. Second, the more elevated river lands of inferior quality, and not subject to overflow. Third, hommock, or second river and creek bottom, or low grounds of a loose black, sandy soil, fertile, and above inundation. Fourth, first quality of upland, of intermediate fertility between the hommock and second quality of upland. Fifth, second quality of upland, consisting principally of piney woods, interspersed with a few oaks, hickories, &c. Sixth, prairie. The extent of the first division, or river bottom, is extremely various and irregular, being sometimes a mere border, of not more than forty or fifty yards in width, and in others extending from one to two miles from the river; and, in other situations again, the second quality of upland or piney woods, reaches to the very river, forming high and precipitous bluffs. Generally, where one bank of the river or creek is formed in this manner, the opposite one is low, with a greater or less extent of rich river or creek bottom. Before, and at the first settlement of this country by the present white population, the rich river lands were covered with thick gigantic cane, this, since that time has, in many places, been entirely destroyed by accidental fires, and by cattle, which are extremely fond of it, especially when young and succulent, at which time they eagerly devour the whole plant. Thus, when the old cane dies, as it does sponta-

neously in a few years, after going to seed, as none of younger growth has been left to succeed, the crop is entirely destroyed. There is, however, in this state, a considerable proportion of cane land, remote from the rivers and creeks. It is scarcely necessary to say, that land of this description is of the first quality. Where the growth of cane is not situated on the rivers and creeks, or, in other words, where the soil which produces it is not *made land*, the result of alluvion and inundation, it is of prairie or lime stone quality. There is a considerable extent of country of this description, commencing about twenty-five miles from this place, lying principally in the county of Maringo, cornering also in Dallas, Perry, and Green. The soil here is a rich vegetable mould, several feet in depth; but like the prairie country generally, it is badly watered. For a distance of thirty or forty miles, in one direction, the traveller finds not a single running stream; and if, by chance, he discovers a little water in a stagnant pool, he "blesses his stars, and thinks it luxury." Besides, in the winter and spring, the roads, as might be supposed, are muddy in the extreme. Notwithstanding these disadvantages, the extreme fertility of the soil in the *Big Cane Brake*, as it is called, causes it to be fast filling up with a wealthy and industrious population. Those in better circumstances have bored through the subjacent lime stone, and found tolerably good water, at the depth of between two and three hundred feet.* Others dig about in sink holes, and collect and use the water that drips and filters through the soil, and is arrested by the rock, forming stagnant pools, which, though warm, brackish, and sulphury to the taste, rarely or never putrefies. Others again, have cisterns, or large excavations, which hold the water collected from the rains. From the scarcity of water, it is a bad country for cattle, which often perish from the want of this necessary element. There is, besides, much fertile land in the prairies themselves, which, however, though in a less degree, are subject to the same inconvenience and objection, scarcity of water, and that of a bad quality. During the dry weather of summer, cattle, hogs, &c. suffer much from the cause above mentioned, and as the pools dry up, a stiff mud occupies their places, in which those animals, in their search for water, often sink, and being held fast by the legs, soon perish, unless discovered and extricated in time. There is one thing of a singular character observed among the cattle of the prairies, which is the deposition of black or dark grey matter in the omentum,

* In the prairie lying in Montgomery county, I have been told one man has bored and found good water at the depth of five hundred feet, the water rising within seventy feet of the surface, to which depth he has sunk his well.

mesentery, and in the peritoneal covering of the stomach and intestines: this is frequently found in patches as large as one's hand, and appears to consist of mud or lime stone; having become redundant in the system from the quantity of impure and muddy water which these animals are obliged to make use of. It is probable that this may be one cause of the murrain, to which they are very subject, and of which they die off in great numbers, with blood issuing from every orifice in the body. The disease, for the most part, is extremely painful and short, destroying life in a very few hours.

There is in this country a vegetable growth, of which cattle are very fond, but which, I believe, has never yet been satisfactorily ascertained, which communicates a most disagreeable taste and odour, (bearing some affinity to that of onions,) to every part of the body. The breath of cattle which have fed upon it is particularly noisome and disgusting. The taste, in a few hours, is communicated to the milk of cows, rendering it extremely unpleasant and unfit for use, unless among persons of obtuse and unrefined sense of taste, or to whom the long habit of using it may have overcome the natural disgust of a first acquaintance. This vegetable, called *the weed*, does not appear to impart any poisonous quality to the milk or flesh of animals feeding upon it, as no injury has ever been known to result from their use. The milk of cows that have fed upon this weed, even communicates its odour to the breath of persons who have taken it freely. The flesh of animals is thereby still more strongly impregnated than their milk, and its taste is so extremely unpleasant that no person can endure it. In cows that are kept up, the taste disappears in a day or two from the milk, but a longer time is required for its removal from the flesh. It is probable that the sensible qualities of this plant undergoes a very material change under the concocting operation of the digestive organs, so as to elaborate a taste and odour not discoverable in the fresh and growing weed: otherwise it would have been impossible for it to have remained so long a matter of doubt and uncertainty.

A great proportion of the houses in this section of the state are built of logs, as being of more convenient and expeditious construction. In the towns, however, of any considerable standing, framed buildings have in most instances taken the place of the more rudely constructed log cabins. As might be expected in a new country, where the immediate necessaries are of primary consideration, but little attention is generally paid to the more refined comforts and elegancies of life. Gardening of every description is very much neglected, except among the more wealthy, and though the heat of our

summers is unfavourable to horticulture, yet by taking proper advantage of the winter and spring, vegetables of almost all the ordinary varieties may be cultivated and reared with very considerable success. No climate is perhaps better adapted to the growth of the egg-plant and tomatoe, (Solanum melongena and Solanum lycopersicon.) To the Irish potatoe, as it is improperly called, (Solanum tuberosum,) the country is less congenial, though by planting it early in the month of February, it is much relied upon as an early garden vegetable; it is generally thought, however, that the seed degenerates in the course of two or three years, and requires the substitution of that which is fresh from the northern states; as far as my own observation extends, I am by no means warranted in the support of this opinion, having almost invariably obtained better potatoes from seed of my own raising; and it is a well known fact that the potatoes imported from Ireland, as they often are, are in this climate entirely unproductive, yielding vines or tops in abundance, but no tubers. The sweet potatoe, (Convolvulus batatas,) in all its known varieties, luxuriates here in the greatest abundance, and is to the inhabitants of the southern states, what the Solanum tuberosum is to those of the northern. Melons of all kinds succeed to admiration, and are much used by the inhabitants; with many, however, as well physicians as others, there is a strong, though I am satisfied an unjust prejudice against them. Does it appear reasonable, I would ask, that a fruit so grateful to the taste, so cooling to the body, and at the same time, that operates so freely and mildly upon the various emunctories of the system as the water-melon, should with all these alluring temptations and specious properties, contain a secret poison? The notion is absurd, and would convert a blessing, designed by our beneficent Creator for our comfort, into a baneful and forbidden fruit. The same observations apply to all the ordinary fruits of the season; and there can be no doubt that they are all alike intended by a kind Providence for our health, comfort, and enjoyment. Throughout the universe, as far at least as our limited observation can extend, we find that the God of nature has wisely adapted the various means and objects of creation to their appropriate design. Nothing is fortuitous, accidental, or improvident. Every animal is adapted and formed to its particular sphere of life and mode of existence. Where reason fails, instinct supplies its place, and directs the inferior creation with almost unerring certainty to the gratification of their natural wants and desires. But to man was given a wider range and a more extended field of enjoyment. The intellectual world opens its resources to the pursuit and gratification of his more noble faculties;

whilst the wide-spread earth, with its diversified objects of the animal and vegetable worlds, are presented in ample profusion for his corporeal gratification. And when panting under the oppressive influence of a vertical sun, can any thing be better adapted to quench the thirst and allay the feverish heat of the body, than the cooling acidulous fruits of the season--the orange, the lime, the lemon, the pine apple, the grape, the peach, &c. &c.? These are the antidotes which nature has kindly provided for our health and well-being against the influence of heat and malaria, and is it not the height of folly and absurdity to suppose, that like the forbidden fruit of paradise, they contain the poisonous properties of misery and death? But deferring this subject to another occasion, I return from my digression.

The peach, (Amygdalus persica,) arrives in this climate to great perfection, and bears fruit in the greatest abundance. Of the plum, there are a considerable number of native varieties, which are good bearers, though the fruit, for the most part, is rather watery and insipid: to the exotic varieties the climate is unfavourable. The fig succeeds but indifferently, though it is much benefited by being placed near the shelter and protection of a wall or building, so as to shield it from the severity of the early frosts, which are apt to injure and kill the succulent branches, whilst the sap is in the full tide of circulation in the fall. The country is rather unfavourable to the apple and the pear, the first being often a good bearer, but generally of slow, difficult, and uncertain growth; the bark being much infested with insects, producing ugly and hurtful excrescences. To this disease the quince is especially liable. I have never seen a pear in the state, though I have been told there are some of good quality in the neighbourhood of St. Stephens. The apricot flourishes finely, but as far as my observation extends, is unfruitful. The cherry, except the wild, is here generally of slow and sickly growth. The currant, as well as the gooseberry, for the most part, wither and die the first year, or if they survive, as they sometimes do, when well protected by the shade of a building, they are still languishing and unproductive. But few experiments have as yet been made with the grape, and it appears that the high expectation held out by the French settlement near Demopolis, so liberally patronized by government, has ended in total failure. This perhaps may be ascribed in a great degree to the quality of the soil, which is of the prairie character, and as such is found to be very unfavourable to the vine. The native grape is mostly of a small, black, dry, acerb, and inferior quality. There is every reason to believe, however, that with proper skill and care in the cultivation, many excellent varie-

ties of exotic grapes might here be made not only a great source of healthful luxury, but also of individual profit. Time must test the practicability of naturalizing the olive; and although the probability is that the mean temperature of this section of country is greatly superior to that of the south of France, yet the sudden and sharp frosts in November, or the latter part of October, often gives such an immediate check to vegetation, as to prove prejudicial and dangerous to the more delicate and less hardy trees and shrubs. Were it not for this irregularity, the orange would doubtless flourish and bear fruit: thus I have known it to resist the ordinary frosts of three or four successive winters, and to be cut down in the fourth or fifth. This tree, however, is cultivated with some success in the city and vicinity of Mobile. Grain of all the ordinary varieties generally succeeds well, with the exception of wheat, which if too late is injured or ruined by the rust, from the hot weather in the latter part of May, or if too early, is destroyed by the frost in February or March, and even sometimes in the month of April. Thus the severest weather in 1828, happened on the fifth, sixth, and seventh of April. The ground for three successive nights was hard frozen; the Indian corn that had been up and growing, was bitten to the root, and required to be replanted; the wheat was almost every where cut off, fruit was destroyed in the germ, and many trees in the forest were killed. Wheat is, therefore, rather an uncertain crop, though still cultivated by many farmers in sufficient quantity for their own use, and not unfrequently to dispose of. In seasonable years the grain is remarkably large and heavy.

Of trees, the Melia azederach, (Pride of China,) is much esteemed by some, on account of the rich and polished verdure of its leaves, the density of its shade, and the rapidity of its growth. The whole tree possesses highly anthelmintic properties, these virtues residing more especially in the root. Caution, however, is required in its exhibition, as in too great quantities it is highly poisonous, affecting more especially the head and eyes, sometimes causing total blindness. The forest trees consist on the upland principally of oak, pine, chestnut, hickory, dogwood; in addition to which, near the rivers and creeks, and on land of first and second quality, we may mention the liquidambers, nyssa, platanus occidentalis, several species of elm, ash, sugar maple, flowering maple, beech, holly, honey locust, black walnut, cedar, sassafras, red bay, large laurel, or magnolia, several inferior varieties of bay, white poplar, mulberry, tupelo, cotton wood, linden or bass wood, &c. &c.

At the first settlement, this country was much infested with bears

and wolves, which were very destructive to the herds and flocks of swine and sheep, more particularly about the rivers, and in the neighbourhood of thick woods, swamps, and cane-brakes; but as the country fills up with a denser population, these wild beasts are gradually destroyed and disappear. The bear tribe, however, though much diminished, is still troublesome in many places, breaking into plantations at night, and committing great ravages upon the Indian corn, of which, in its green or milky state, this animal, epicure as he is, is extremely fond. Deer are still numerous, as are also wild turkeys, and formed a great portion of the subsistence of the first settlers. These animals and fowls are much hunted, more particularly the former, by persons fond of the chase, as those of the south generally are.

There is a species of locust which sometimes abounds here in immense quantities. In shape it resembles the common locust, differing in colour, which is of a reddish cast. Its noise resembles the croaking of a frog. They are said to make their appearance in seven years. Last year the country swarmed with them. They appear to live by suction. They are furnished by a strong sharp bill or proboscis, with which they perforate the leaves and tender twigs and extract the juice. They are but of short duration, and previously to their disappearance, they deposit their eggs in the centre of young and succulent shoots, which they perforate for the purpose with a strong, horny, and pointed tail with which they are furnished. These eggs in a few weeks hatch out, and form small white worms, which immediately descend into the earth, and there remain, till the animal acquires maturity and becomes a creeping chrysalis, when it again perforates the ground in its ascent, and attaching itself by its claws to the nearest tree or plant, bursts its investing shell upon the back, and becomes a winged insect of the air and groves.

Rattlesnakes have much diminished of late years; they are still however, tolerably numerous, and almost every family takes precaution against them, by having a vial of liquid ammonia in the house: this is given as soon as possible after the bite, in the quantity of a tea-spoonful, in water, every ten or fifteen minutes until relief is obtained. Given in this way, and applied to the part, it is said to be an effectual and sovereign remedy. Deaths, however, sometimes occur very suddenly from the bite of this venomous reptile, though none have fallen under my own observation. A fatal case occurred a few miles from this place a few weeks since, in a lad about twelve years of age. The bite was inflicted on the ankle; the limb was corded below the knee, but in a few hours swelled so prodigiously that the ligature was removed, and applied above the knee, still the swel-

ling increased, the leg below the knee turned black, cracked open, and became gangrenous; the mortification at length attacked the thigh, and extending to the body, destroyed life the fifth day. Such was the intensity of suffering and pain, that aberration of intellect or delirium soon came on after the injury, and continued with little interruption to the fatal close. After death the body swelled immensely, turned livid, and the dissolved blood exuded through the pores of the skin. A variety of popular remedies were tried, though without the advice of a physician. The above history I gathered from the parents after the death of their son.

Of the serpent order there are a great variety, though but few are poisonous. There is a rare species, about six feet in length, a specimen of which I forwarded a few years since to Dr. MITCHELL, of New York, who considered it a species of the boa, though it had not hitherto been described by any naturalist. Considering the number of venomous reptiles and insects in this country, it is rather surprising that accidents and injuries from them do not happen more frequently. There is an insect peculiar to warm climates, which, according to its size, is represented as being very venomous. This is the large, solitary, red ant. It is from an inch to an inch and a quarter in length, with a body larger and longer than that of the honey-bee, but more round and more elegant in its form, of great strength and activity, and protected with a very hard and apparently crustaceous covering; it is clothed with a short velvet down, and has two black spots, one on the body or thorax, and another on the tail or abdomen superiorly; its sting is about a quarter of an inch in length. Ticks and red bugs are also very numerous and troublesome; the latter are scarcely discernible to the naked eye, appearing like very minute red points; they fasten themselves in the skin, create a burning sensation, and a very severe itching, and in children and young people, unless removed in time, giving rise to painful and tedious ulcerations. They are different from the chiego of the West Indies and Florida, which burrows and breeds in the thickened cuticle of the feet of the negroes, and beneath the nails, producing a bag or cyst, like a hydatid, and sometimes working their way entirely through the joint, so as to cause the toes to come off. The red bug, on the contrary, remains solitary, and does not generate in the skin; they abound in the woods, and about old decaying timber. Mosquetoes are not generally numerous, unless in certain wet or marshy situations, or after great rains. They always require stagnant water for their production, and as regards locality and health of situation, may therefore be looked upon as an unfavourable omen.

The white population of this section of country, as well indeed as of other portions of the state, consists principally of emigrants from North and South Carolina and Georgia. The next most numerous portion are Tennesseans, then follow the Virginians, New Englanders, and others, from every state and section of the Union. To these may be added not a few Scotch, Irish, Dutch, French, Swiss, &c. Such diversified materials compose the population of most new countries, which amalgamating by intermarriages, in the course of one or two generations becomes more assimilated and national in its character. It is now the land of their adoption—it will then be the land of their birth: old and cherished prejudices, and fond recollections and regrets of dissevered kindred and friends and native country will die away with the present stock, and new feelings and associations of indigenous growth spring up with the rising generation.

In a land possessing so many natural advantages, it was readily to be supposed that the wealth of the country must be rapidly increasing. The extensive range of the grass and cane of the woods, swamps, and prairies, and the mildness of the winters, renders any provision, except a little salt, unnecessary for the cattle, which are consequently cheap and plenty. All the comforts of life are raised in the greatest abundance, besides a vast amount of surplus staple for exportation. The returns made to the planter, after paying off his store account contracted during the year for groceries, and sundry articles of luxury or convenience, is laid out in the purchase of land or negroes, and thus the numerical force and riches of the country goes on increasing in geometrical progression from year to year. To this rule there are certainly exceptions, both among merchants and farmers, who, by imprudence and mismanagement, sometimes come to poverty and ruin. Instances of this kind appear to occur more frequently among the farming part of the community than others: and the reason is obvious; for as agricultural labour is here principally performed by slaves, with the exception of the poorer class, under the conduct of an overseer, the proprietor has much leisure upon his hands, which is often spent in hunting, drinking, and convivial associations. Those hours which by a northern man are generally devoted to intellectual or corporeal labour and application, are here, by the idle and more wealthy, frequently spent in recreation, sport, and too often hurtful and demoralizing dissipation. Much time in this manner runs to waste, which might and should be husbanded to accounts, in the acquisition of useful information, and in building up a character of improved talents, and scientific and literary accomplishments. The militia musters throughout the state

are, almost always, attended with much disorder, drunkenness, and fighting. At such times and places, persons holding grudges and old animosities against each other, often suffer their passions to rise with the warming, exhilirating and courage-stirring influence of spirituous potations; fights ensue, and sometimes death is the consequence. There is certainly a vast amount of drunkenness in this state; and although the principles of the temperance society have had some influence in arresting the extent of the wide-spread havoc, yet the resorts of dissipation, the bar-room, grocery, and tippling shops still attest the extreme and alarming prevalence of intemperance. The retailer of spirituous liquor has probably a greater amount of crime and responsibility to answer for than any other person in society. Laws are passed for the punishment of overt acts of personal violence, assaults and outrage, and yet the most efficient cause of all this mischief, the man who scatters abroad "fire brands, arrows, and death," is tolerated and protected in society, and even looked upon, or rather overlooked as innocent.

It is scarcely necessary to say, that cotton is here the staple article of growth and exportation. Many of the farmers, however, of the middle and southern sections of the state, are now turning their attention to the sugar-cane; and from the small trials that have been made, with every prospect of success.

There is here a long continuance of hot weather, which generally commences with considerable intensity about the 10th or 15th of May, and lasts until about the middle of September. Thus we have four months of hot summer weather. From the middle of September to the middle of November, the temperature is mild and pleasant, the nights cool, and the days comfortable. The same may be said of the period embraced between the 15th of March, and the 15th of May. Thus, in relation to the general temperature, we may divide the year into three equal parts; viz. the cold, the temperate, and the hot seasons; the temperate season being nearly equally divided by the intervention of summer or winter. The cold of winter is seldom severe or long-continued, and from the great proportion of warm and temperate weather, the country is remarkably exempt from pulmonary consumptions; this disease scarcely ever appearing except in persons strongly predisposed by hereditary conformation. I have known several persons affected with catarrhal phthisis, from neglected and improperly treated pneumonic affections, who have finally recovered a comfortable share of health after a protracted illness. Persons affected with phthisis pulmonalis, or a great predisposition to that complaint, experience very decided benefit from a

residence in this climate. Comparatively very few deaths take place from this disorder, probably not more than one in two hundred of all the fatal cases from every disease. The salutary influence of this climate in phthisical invalids, I am persuaded, requires only to be known to be taken advantage of, and duly appreciated. In the year 1815, I embarked from New Orleans for New York; among the passengers was a delicate young gentleman, who had resorted to the climate of Louisiana for his health: his chest was small and compressed, and evidently of the phthisical conformation. Yet he appeared, at this time, to enjoy a very tolerable and comfortable share of health. It was now the month of April, and as we lay in the Mississippi waiting for a favourable wind, the weather was extremely warm, and we were much annoyed with mosquetoes: yet there was no sickness among us; and even our phthisical invalid was hearty and cheerful, enjoying the comforts of the table, and participating in the pleasures of the social circle. He had no cough, wheezing, or apparent difficulty of breathing. After a safe and pleasant passage, we arrived at New York on the 8th of May. As we approached the harbour, the land air around us felt damp, chilly, and uncomfortable. This was more particularly experienced by our consumptive companion. As we were detained a day or two by quarantine, he grew sensibly worse. Upon landing, and walking only a few hundred yards, he found himself quite out of breath, exhausted and overcome. We parted, and I looked upon his fate as speedy and certain. He should, certainly, at the expense of all reasonable pecuniary sacrifices, have taken up his residence in a country which he had found so congenial to his health; at least until his system and pulmonary organs had become invigorated, and the fatal predisposition had been replaced by a sound and healthy constitution. Had the lamented Dr. GODMAN also pursued this course, many years, in all probability, would have been added to his valuable life; and medical science, and the cause of humanity would still have been benefited by his talents, and his labours.

Although, as previously stated, the winters are not generally long, or very cold, yet I have, at sundry times, known the weather quite severe for several days successively. Thus, on the 6th and 8th of February, 1824, the mercury in Fahrenheit's thermometer, at sun rise, stood at 8° degrees above zero. Water standing in tubs and buckets, was frozen solid, and the earth for the first and only time since I have been in the state, which is now ten years, was covered with snow for nearly two days. This severity of weather extended throughout the southern section of the union, killing the fig and

orange trees to the ground. On several days since then, I have seen the mercury as low as 15° or 16°; such instances however are rare.

During the summer the prevailing wind is westwardly, varying from the south-west to the north-west. After a general rain the weather often clears off with a strong or fresh wind from the north-west. Rain-bearing clouds come from any point southwardly from the south-east to the south-west. From the east northwardly to the north-west, and so on to the west-south-west, the winds are dry, unless there has previously been a prevalence of southwardly winds, when showers sometimes spring up from the north, by a sudden condensation of vapours which are driven back to the south. The wind in winter frequently sets for several days together, from the north-east; the air is then damp, chilly, and disagreeable, and the sky dappled and overcast with fleecy clouds, the weather being such as in the Atlantic and eastern states would indicate snow or sleet; but before the clouds arrive here their humidity has been precipitated, so that we perceive only the rack of the Atlantic storms. In winter the winds are extremely variable, after a rain blowing keen and cold for a day or two from the north-west; then veering to the south, and bringing us the atmosphere of the tropics, cooled and tempered in some degree by admixture with that of more northern latitudes. It is scarcely necessary to say that these changes of the wind from north to south, and the contrary, are productive of great and sudden changes in the temperature of the weather, which from a degree mild and pleasant, often sinks to the freezing point in the course of twenty-four hours. As our cold weather comes principally from the north, being scarcely indigenous to the climate, it is obvious that a prevalence of winds from any point north of west or east must produce a diminution of temperature. This is more especially the case with winds from the north-west, since they come from a bleak frozen country, clothed with forests and covered with snow. or from inland seas, shaded and bound up in semi-perpetual ice.

Droughts of several weeks duration are very liable to happen in the summer months. Thus, during the hot weather of 1826, there was an extensive drought, in many places of the middle and southern portions of the state being of nine or ten weeks duration, only very few places being visited by light and partial showers. The same kind of weather, I believe extended throughout the greater portion of the southern states. In many places the Indian corn was totally burnt up and killed to the very top. June is generally dry, literally verifying the old Saxon appellation of *sero monah*, dry month. At this time, July 3d, there has been a long spell of dry weather, and the

crops were fast withering and dying. A fine rain, however, yesterday, from the south-west, came in seasonable time to arrest the work of destruction, and revive the drooping spirits of the farmers. The month of April last was almost unprecedented for dryness, but one or two small showers having fallen during the whole month. The summers of 1822 and 1823, on the contrary, were unusually wet, more especially the latter, the earth during the months of July and August being drenched and inundated with floods of rain. On the 22d of April, 1822, there occurred the highest fresh ever known since the settlement of the country by the whites: the town of Cahaba was laid almost entirely under water, in some places to the depth of six or eight feet. Of late years the rain has been much less abundant, and there has, in the mean time, been a very considerable improvement in the health of the country: whether this has been owing to any change in the state of the atmosphere, or to any obvious alteration of the weather, or to the acclimation or seasoning of the inhabitants, or to all these causes, is not for us to determine with absolute certainty. Much, however, I think may be ascribed to the latter of the above circumstances; for it is now found, that although the old and acclimated residents enjoy almost uninterrupted health, with nearly complete exemption from bilious fevers, yet whenever a stranger arrives from the eastern or northern states, or even from Tennessee or Kentucky, they are pretty certain to experience an attack of the endemic fever under a character of greater or less severity, and which sometimes, under improper treatment, terminates fatally.

The Alabama river is at this time, September 8th, lower than I have ever known it, being fordable in many places. Many springs of water, which before have never been known to fail, are now quite dry. August has been uniformly hot, with the exception of the nights, which towards the latter end of the month would become cool and comfortable before day: during the hottest part of the twenty-four hours, the mercury of Fahrenheit, in a cool and ventilated apartment, has stood above 100°, and for several days in succession has exceeded 90°. I perceive from the journals that the heat in the northern states has been more than usually intense this season, many persons having perished from the heat, and from the imprudent use of cold water while in a fatigued and heated state. As the temperature of well water must be nearly the mean temperature of the climate, it may readily be supposed that the water here is never sufficiently cold to be productive of any serious consequences; accordingly, I have never known any accident to arise from this cause.

It is probable that the dispersion of humidity, and the diminution

in the quantity of rain may have had considerable influence in rendering the country more healthy, and more exempt from the endemic fevers of summer and autumn. The settlement and first cultivation of new countries is generally extremely prejudical to the health of the lately-arrived inhabitants: the vegetable matter that had been accumulating for ages, undergoing a great and sudden decomposition, infects the air with noisome exhalations, from the inability of the recent vegetable growth to appropriate to its increase and support the excessive supply and redundancy of putrefactive products.

For the last few years more injury has been sustained from a deficiency than from too great a quantity of rain. What connexion this may have with an increased and greater uniformity of temperature during the summer season, I am unable to say, though it would appear that as we approach the more uniformly heated and equatorial latitudes, rain becomes less frequent and considerable, except in hilly and mountainous districts of country, where elevation counteracts the natural influence of approximation to the equator.

It would seem, that as the country becomes settled, cultivated, and improved, and the forests proportionably diminished by the labour of agricultural industry, the atmosphere is rendered less humid, the vapours and exhalations are more suddenly dissipated, and the aggregate quantity of rain is lessened. To illustrate this fact in a scientific and satisfactory manner, it would be necessary to compare the quantity of rain that had fallen during the first four or five years after the first settlement of the country, with that of a like duration immediately preceding the present time; but as we possess no such data, we can only judge from obvious circumstances, among which we may mention the annual state, rise, and degree of inundation of our rivers. It is well known that our freshes have become of late years much less frequent and considerable. This may, perhaps, be partially ascribed to the more rapid evaporation of humidity after rains, in consequence of the earth being more freely exposed to the action and influence of the solar rays from the operation of clearing. The rains of winter seldom fall in sufficient abundance to raise the rivers until the month of December, so that it is often not before Christmas that the steam-boats commence running. January, February, March, and April, are generally rainy months, though this year the latter month was extremely dry.

It has been observed, that in very dry summers, the showers for the most part follow the direction of the rivers and larger creeks, so that whilst the land adjacent to the water-courses is in many instances drenched with rain, the upland and other places out of the main di-

rection of the streams are parched with drought. Whether this is to be explained by the mutual attraction subsisting between the more cool and humid atmosphere of such situations, as caused by local exhalation, and the rain-bearing clouds, or by the state of electricity as influenced by such exhalation, I am unable to say, but that an attraction of some kind actually exists, would appear to be satisfactorily proved by the circumstances above stated.

At present, September 9th, a very extensive drought prevails throughout every portion of the southern and western states, as far as heard from, viz. Ohio, Kentucky, Tennessee, Arkansas, North and South Carolinas, Georgia, Mississippi, Louisiana, and Alabama. In Georgia it has been particularly severe, the crops having been cut short more than one-half. The same is also the case with many parts of this state remote from the water-courses. Other situations have been more favoured; but it is now more than a month since the ground here has been wet with rain, and in other parts of the country there have fallen but one or two showers in the course of three months; vegetation of all kinds is fast drying up, the fruit upon the trees is shrunk and shrivelled, and the leaves dying and falling prematurely: many trees of the forest, especially in sandy soil, are actually dead: in short, to use a figure of sacred writ, "the earth is turned into iron, and the heavens into brass."

Since writing the preceding, the country has been favoured with partial showers; though the ground is so excessively dry, that a week's rain would scarcely penetrate to the moist earth.

This country is very subject to high winds and tornadoes, which are generally accompanied with rain, rendering them more dangerous and destructive. At sundry times within the last year, this vicinity has been thus visited, to the great inconvenience and damage of the farmer, whose plantation thereby is often strewed and covered with dead trees, his crop in a greater or less degree destroyed, his fences blown down, horses and cattle killed, or perhaps his houses and cribs razed to the ground, and the whole fruits of his year's labour scattered before the wind. Such instances of overwhelming destruction are not very frequent; though one occurred last November, in a tornado which passed about twenty miles below this place: it was from a hundred and fifty yards to a quarter of a mile wide, and of uncertain extent, perhaps four or five miles long; diminishing gradually in severity as it progressed. Before it trees were as stubble, and houses and their contents as chaff. Owing, however, to its limited extent, and the sparce population, no human lives were lost. Hail storms, accompanied with much thunder and lightning, fre-

quently happen in the months of March, April, May, and June. One occurred in Tuscaloosa in the latter part of March, 1829, which ruined all the gardens, and destroyed every leaf of vegetation; leaving the hail in many places, as it drifted, several feet in depth, a barrel of which, as a curiosity, was put on board a steam boat and taken to Mobile. On several occasions, in the spring of the year, I have seen the trees of the forest entirely stripped of their leaves by the hail, and the earth covered several inches in depth with the offensive putrefying foliage. A storm of this kind occurred in the vicinity of this place, during an extensive shower on the 2d of July; the hail left upon the ground was three or four inches in depth, and was to be seen the next day. It was principally limited to three or four plantations.

Generally, the hottest weather occurs in June, though the months of July and August are very sultry and oppressive. During the three summer months the system is much relaxed and debilitated. This effect of the weather is here, as in more northern climates, more remarkably exemplified among children and teething infants, who are at this period very liable to *cholera infantum*, and chronic diarrhœa, or as they are usually termed, *bowel complaints*. These, though often obstinate, are not generally, or even often, fatal: as out of a number of cases this season, I have not lost a single one from this disorder; and frequently having to prescribe under the disadvantage of not seeing the patient. This affection is frequently complicated with worms, for which as well as to answer the purpose of an alterative, I prescribe calomel in small doses, say, one, two, or three grains every night, for two or three nights in succession; and three or four grains of Dover's powder, repeated every night at bed time; a dose of castor oil once or twice a week; sometimes substituting, as a mild purgative, with the best effects, rhubarb and magnesia. Should there be any tenesmus, or dysenteric symptoms, exhibiting at night, after the operation of the purgative, an anodyne enema, consisting of starch, warm water, and eight, ten, or twelve drops of laudanum to children a year or two old. As an anthelmintic I prescribe, almost indifferently, oil of wormseed, (Artemesia satonica,) Spigelia, or a decoction of the bark of the Melia azederach; the two latter require to be exhibited with caution, as I have known the sight sometimes impaired by them, and even complete amaurosis result from the free use of the decoction. Of the decoction or infusion, made moderately strong, I direct a wine glassful to be taken twice a day, for two days, then omitting its use a day or two, and again resuming it should it be necessary.

Sudden changes in the weather, during the summer, from hot to cool, are unfavourable to health; giving rise to various degrees of what are called *colds*, and in children, an affection of the mucous membrane of the bowels, showing itself in cholera, diarrhœa, and dysentery. Adult invalids, and persons convalescent from preceding sickness, are also affected by these complaints. This is more especially the case, at the approach of the cool weather of autumn; those who have suffered attacks of bilious fever being then especially liable to relapses, under the form of ague and fever, or as it is commonly called, *chill and fever*. In proportion as the inhabitants have become acclimated, disease has greatly subsided; insomuch that the probability is, that at this time, there are few more healthy states in the Union. The so much dreaded yellow fever of our seaports, now that its character and treatment are better understood, ceases to inspire terror; nor is the interior of our state now visited with the bilious fever, except in a few detached points of peculiarly unhealthy location, or in a few sporadic instances of unacclimated subjects,* and even in those it is rarely obstinate or dangerous, except from improper treatment.

For the three first years after my arrival in this state, in 1821, 1822, and 1823, the country was dreadfully sickly, and the mortality great and appalling, more especially near the rivers. The whole country was then new, and the warmth and humidity of the seasons caused a great and rapid decomposition in the recently exposed and turned up vegetable matters. Many flourishing towns upon the

* During the present summer, August 11th, I was called to visit some patients at Canton, a small town on the Alabama, twenty-five miles below this place. There were there a number of aggravated cases of bilious fever, some two or three of which terminated fatally; yet almost every other part of the country has proved quite healthy, at least as far as the fever has been concerned. The local aspect of the above-mentioned place, at the first glance, would appear healthy, being very high, and the soil sandy. Contrary to the observations of some physicians, I have generally found, that towns and settlements upon sandy soil, were more subject to bilious fever, than others where the surface was stiff and tenacious, from an over-proportion and admixture of clay. For this I can only account in this way, that the sandy soil becomes more heated, and, therefore, gives rise to a more copious extrication of miasmata. The town of Canton is situated on a very high bluff, but the place is much overrun with tall weeds, bushes, and shrubbery of various kinds, covering the earth with the litter of decaying leaves, and other vegetable matters, and retaining the water that falls in rains. It has, moreover, been found, that very high bluffs, in the immediate vicinity of low grounds, are more subject to disease than others that are less elevated.

rivers, which had risen up, as it were, by the hand of enchantment, received a sudden check, and became suddenly almost totally abandoned, from death and desertion. Strangers from every part of the United States, invited by the fertility of the soil, the beauty of the country, and the serenity of the climate, brought together by fortuitous association, with foreign and unseasoned constitutions, were suddenly swept off by thousands. In many families there were not well persons sufficient to attend upon the sick and dying. Never have I known a time of such general calamity. There was then no "tempering of the wind to the shorn lamb," but age and infancy were alike hurried to the grave; *Rachael* was not even spared to *weep for her children*, but fell an indiscriminate sacrifice before the destroying angel. From this severe visitation many places have not yet recovered: and as the population of the state since then has augmented threefold, we can form some notion of the vast natural advantages and inducements held out to emigrants, who, in such numbers, could brave all the terrors of a country that to many had proved so uncongenial and fatal. But these times are happily passed; and we can now look back upon this melancholy period of our history, like the shipwrecked mariner who stands upon the sunny shore, and contemplates with mingled emotions of joy, gratitude, and sorrow, the danger and destruction which he has escaped.

As there is a very considerable proportion of cool and variable weather during our winter months, the diseases of this season, though less numerous, resemble those of northern climates, being mostly of an inflammatory character; among which the most common are pleurisies and inflammations of the lungs. Ophthalmia and rheumatic affections are also frequent. But it is unnecessary to go into a particular enumeration and detail, as the diseases incidental to other climates, with certain limitations and exceptions, already hinted at, are also common here.

Cahaba, Alabama, 1831.

ART. VIII. *Medical Cases.* By J. FRANKLIN VAUGHAN, M. D. Physician to the Alms-house of New Castle County, at Wilmington, Delaware.

CASE I.—*Hepatic and splenic derangement, simulating organic disease of the heart or aneurism of the aorta.*—A married lady, who had generally enjoyed good health, and was the mother of several fine

children, was attacked in the latter part of July, 1825, with bilious fever, then prevalent in the district in which she resided. The attack being violent, and the fever of a highly inflammatory type, her physician, (as he informed me,) had to resort to active and decisive measures for relief. Depletion free and repeated, by the lancet, active purging, and all the usual antiphlogistic means were put in requisition. In the course of a short time the fever yielded, tonics were prescribed, the patient pronounced convalescent, and medical attendance discontinued.

In about six weeks, however, the doctor was summoned to visit his patient in haste, as she was "dangerously ill." He found her labouring under an urgent sense of suffocation, violent palpitation of, and a most distressing feeling of weight about the heart, with acute pain. Venesection was at once resorted to, and some relief afforded, but the pain in the region of the heart and the palpitation continued. A consultation with an aged and respectable practitioner was held, and her disease was pronounced to be either, (*which*, they found it impossible to ascertain,) "an organic affection of the heart, or an aneurism of the aorta at its arch." Under these circumstances, a palliative course was adopted, consisting of venesection once or twice a week, according to the violence of the symptoms, with digitalis, absolute rest, low diet, anodynes at night, &c. This plan was continued for near two months, without any alleviation of the distressing symptoms, but, on the contrary, (as the patient stated,) they were all greatly aggravated, when I was called to see her.

Her situation at this time was truly deplorable; *the palpitation of the heart was so violent as to throw up the bed-clothes,* (at every diastole,) *so as to be distinctly seen across a large room!* and the mental despondency was greater than I had ever seen it, despair seeming literally stamped upon the features. This state of mind, however, I was not much surprised at, when I learned from the lady that she had been made acquainted with the fearful diagnosis and still more terrible prognostic—a sudden death. The patient was, as might be expected, very much debilitated; her skin was sallow and unhealthy, the bowels torpid, being evacuated only by medicine, and the pulse wiry or corded, quick and frequent.

After a minute enquiry into the history of the case, and a most careful examination of the thorax, both by mediate and immediate *auscultation*, I was induced to believe that there was really no primary or permanent disease of either heart or aorta. Some other cause for the situation of the patient was then to be sought for, and my attention was immediately directed, (by the history of the case and the

generally depraved state of the system,) to the chylopoietic apparatus; and here I soon found a state of things which confirmed the opinion already expressed—a very great enlargement and induration of the spleen, some enlargement, evident induration, and slight tenderness on pressure in the liver, and the usual debility and disorder of stomach consequent to biliary obstruction.

Might not then all her sufferings be referred to the derangement of the functions of these important organs, and all the indications of disease in the thorax be sympathetic and delusive?

In the subsequent consultation, this opinion was looked upon, (by those in attendance previously,) as fanciful or "speculative;" and the indications, or methodus medendi predicated upon it, positively condemned as being utterly inadequate to relieve the urgent and alarming symptoms, and only calculated to hasten the termination of an incurable disease! On, however, fairly, plainly, and explicitly stating the case in the presence of all concerned, my opinion, and the treatment founded upon it were adopted—because it offered some hope, the other none.

The course pursued may be related in a few words. A very slight salivation was excited by the blue pill, and maintained for about four weeks; an epispastic applied over the liver and spleen, dressed, (as soon as it could be borne,) by the ungt. merc. a light but more nutritious diet was allowed, and cheerful society, &c. &c. recommended. Soon after a gentle ptyalism was established, the obstructed secretions were restored, the torpid bowels became regular, and the enlargement of the liver and spleen were found to be yielding to it and the counter-irritants; a perceptible diminution in the violence of the palpitation, with relief of pain, weight, oppression, &c. directly followed, and the general health gradually and regularly improved, until a complete restoration was effected. During the convalescence, tonics, (especially cort. peruv. with rad. valerian.) were freely administered, aided by a nutritious diet, and as soon as the strength was sufficiently increased, active exercise, especially riding, &c. &c. Five years have now elapsed, and this lady continues perfectly well.

The preceding case suggests several remarks—but leaving others to draw their own inferences, I will only notice two, which appear to me of practical importance. In the first place, the only difficulty was in making a *correct diagnosis*, and yet the *most efficient* aid in forming it—auscultation—was entirely overlooked, and the idea that it really afforded any important information, was treated with derision! and this by respectable (though certainly mere *routine*) coun-

try practitioners. *Jam solvi nobile problema—dato aliquo morbo, invenire remedium?* Every one will admit the truth of this proposition—but the difficulty lies in the *dato morbo,* (the disease, *not its name,* being given,) which is, very frequently indeed, not the fact. The tissue affected, the nature and degree of its morbid lesion, or even the *organ,* or more than this, *even the cavity* in which the disease is located, are often involved in great obscurity.—I have always considered *the diagnosis as the great difficulty* in the practice of medicine; and, therefore, value, above all others, those works and those means which are calculated to throw any light upon a subject of such vital importance. Is it not then *unpardonable* in a practising physician to neglect any of those means, and especially when of such established utility as the stethescope?

2d. The state of the pulse, and the appearance of the blood detracted in this case, are worthy of notice and comment. The former was *frequent, corded,* and *tense;* and the latter *buffy* and *cupped*—up to the period of my first visit; and these facts were confidently insisted on, not only in justification of the repeated bleedings, but as absolutely demanding their continuance. My views, however, were very different—I had seen this same *synocula pulse,* small, corded, frequent and tense, exist in a state of *alarming debility*—had witnessed its removal by the use of tonics and a nourishing diet, and had been fully convinced, that repeated bleeding might and would *produce it*—but never can, never did, *remove* it.

Accurately to discriminate between the *irritable* and the *inflammatory* pulse, though at all times of the utmost consequence, is, occasionally, exceedingly difficult. My excellent friend, and. for some time, preceptor—the distinguished Dr. Parrish—used to relate the following interesting example, in his lectures:—While Dr. Wistar was in Edinburgh, he with some other students, one day bled a dog to death. Just before he expired, a practitioner, (who was well accustomed to feeling the pulse,) happening to step in, was requested to place his hand on the dog's heart, (being unacquainted with what had been done,) and inform them whether the action was *sthenic* or *asthenic?* He made the desired examination, and pronounced the excitement to be—*sthenic!*

This synocula pulse is frequently met with in the advanced stages of phthisis pulmonalis, accompanied by great prostration of strength: and also occurs, occasionally, in hectic fever, proceeding from diseased bones, old, indolent, and sloughing ulcers—where it is merely the effect of irritation. Sometimes, indeed, it may be found just before dissolution—appearing to be only the last struggle of expiring nature.

Concerning the indications to be drawn from the appearances of

the blood, Sir Astley Cooper gives us a valuable lesson, or caution, in the following case:—a man, (in Guy's hospital,) in the *last stage of scurvy, whose skin would ecchymose from the slightest pressure, and from whose gums blood was oozing, was bled,* (a little being taken as an experiment,) and, *even here,* the blood was both *sizy* and *cupped!*

Case II.—*Ascites and anasarca, from enlarged spleen.*—John H. a labourer from the Chesapeake and Delaware Canal, was admitted into the Alms-house on the 15th of November last. He stated that he had been labouring under "fever and ague for four months, had a very large and hard ague cake in his left side, for about three months, and had been swelling gradually, for six or seven weeks past." At the time of his admission he had a severe chill every evening—discharged blood from the bowels, and the accumulation of water was so great, as to confine him entirely to bed. The enlarged spleen, (as hard as a board, to the touch,) filled the whole of the left hypochondriac, iliac, and inguinal regions, extending down almost in contact with the os pubis, and across the epigastric and far into the right iliac and inguinal regions. Its size was, indeed, almost incredible. The abdomen was distended with water—the feet and legs swelled almost to bursting; the countenance sallow, pulse feeble and frequent, skin dry and harsh.

Mercury being evidently demanded, it was at once had recourse to. A pill of calomel and opium, āā. gr. ss. with squills, gr. ij. was given three times a day; with tinct. digitalis, gtt. xv. gradually increased to gtt. xl. immediately after each pill. And he was rubbed, mane et vespere, with ungt. merc. In three days, a gentle ptyalism was excited—the chills ceased almost immediately—copious discharges of urine soon succeeded, and in about ten days all dropsical swelling was gone. The morbid condition of the spleen was not, however, materially improved, and the patient could not be considered safe whilst the cause of his dropsy remained. The inefficiency of mercury, in many old cases of enlarged spleen, has long been known, and a remedy, on which more dependance might be placed, ardently desired. This, I trust, has at length been found in iodine and its preparations. In this case, gtt. xij. of a saturated tincture, gradually increased to gtt. l. ter in die, and continued in that dose, until the head and stomach became slightly affected—with the following ointment well rubbed in over the tumefaction, morning and evening, in about four weeks reduced the spleen to its natural size and healthy functions, (whatever they may be.) ℞. ungt. merc. ℥ss., hydriod. potass. ℈ij., liq. potass. gtt. vi. M. ft. ungt.—One half of which was rubbed in daily. It may be

proper to add, that the chalybeate tonics were given to complete the cure.

The preceding case is related chiefly with a view to make a few brief observations on the treatment of dropsy, and to afford additional testimony in favour of the effects of iodine in enlarged glands, or visceral obstructions—a troublesome and sometimes intractable kind of cases.

1. The diuretic combination used in this case, (viz. calomel, squills and digitalis,) has been condemned by a very respectable writer, Blackall; and some practitioners may, on his authority, have discontinued its use. But I can conscientiously declare, that in no disease have I seen any medicine display more decidedly beneficial effects than this combination does in dropsy. I could relate many cases in which it produced the same happy result as in the preceding; but will mention only one, now under my care, in which the patient was cured by it, two years since—recently exposure and intemperance brought on diseased liver and its consequence, dropsy; and again is he rapidly recovering under the use of the same medicines. In reply, then, to any speculative objections against a combination or prescription of *fully ascertained value*, I have only to say that what I have related are facts—and that *facts are stubborn things;* that they will not, nor can they be made to bow submissive before *theory*, no matter how high may be the source from whence it emanates. If the answer, "*experientia docet*," can be truly made to any hypothetical doctrine or opinion, it is not conclusive? I should add, before terminating my remarks on the treatment of dropsy, that I prefer the calomel and squills, in pill, (with or without opium, according to circumstances,) and the digitalis in tincture; for, by exhibiting them in this form, the latter can be gradually increased or diminished, pro re nata, while the pills may remain unaltered; and often, the mouth becoming sore, it is proper to discontinue the pills, when the digitalis ought not to be omitted, indeed cannot, with propriety, be dispensed with.

2. Of iodine, I might mention, in addition to its decided effects in the preceding case, several others of enlarged spleen, the sequelæ of intermittent fever entirely removed by it—as also a case of goitre, and one of sarcocele, cured by the tincture internally, and the ointment above-mentioned, topically, in about four weeks time. But I will only relate one more instance of its triumph over disease.

Case III.—*Incipient Phthisis.*—Mrs. M. a young widow lady, of a consumptive family, after labouring under amenorrhœa for three

months, was attacked with hemoptysis, succeeded by a troublesome, dry cough, and hectic fever. When she applied for medical aid, in addition to the symptoms mentioned, her skin was sallow, and her general health in a very depraved state, with a quick and frequent pulse, and great debility.

Having seen, in some one of the medical journals, a statement that iodine had proved serviceable in a similar case, I concluded to give it a fair trial; and, consequently, directed gtt. xij. of a saturated tincture, (forty-eight grs. to the ℥j.) to be taken, ter die, increased daily a drop at each dose. It was continued with this gradual and regular increase of the dose, until gtt. lx. were taken three times a day. This quantity was persisted in for six days, no bad effects ensuing, when the *menstrual discharge* came on; the consumptive symptoms rapidly subsided, and the patient's health was soon restored.

The following winter this lady "took cold whilst unwell," amenorrhœa was the consequence, with a return of the consumptive symptoms, which were again removed in the same manner as before. No other medicine was used in this case, except sulph. sublim. or magnes. calc. to keep the bowels in a soluble condition.

In conclusion, I think it proper to add, that I have never seen any injurious effects from the iodine, though used freely and frequently in both my public and private practice.

Wilmington, Del. Feb. 1831.

ART. IX. *Observations on Vision.* By BENJAMIN F. JOSLIN, M. D. Professor of Mathematics and Natural Philosophy in Union College, Schenectady, New York.

ACCOMMODATION of the Eye to different distances.—When the pupil of one of my eyes was dilated by stramonium for certain physiological experiments, (an account of which will be published hereafter,) some indistinctness of vision was experienced, which was found on examination to affect objects at moderate distances only. All objects in the room were somewhat obscure, whilst those situated without, at the distance of many rods, appeared equally distinct to both eyes. By placing in contact with the eye, and directly before the dilated pupil, an opaque plate, perforated with a *circular aperture of nearly the same apparent magnitude* as the other pupil, there was no appre-*

* The incident and emergent rays undergo a similar refraction at the cornea.

ciable difference in the distinctness of vision with the two eyes at any distance. It was, however, found necessary to employ different apertures for different distances, not only when the object was near the distance of distinct vision for minute objects, but at distances of many feet. The less the distance, the less was the requisite aperture; so that by employing artificial diaphragms of different apertures, the same distinctness of vision was obtained as with the eye in its natural state. This, however, was of course only true of direct vision; for in oblique vision, the lateral and too oblique rays of the pencil would not be thus excluded, and no artificial substitute can in that case be provided for the natural interior diaphragm, the iris, so happily imitated in the periscopic glasses of Dr. Wollaston. It is also probable that even in the case of very distant objects, there was a greater spherical aberration in the eye whose pupil was dilated, but that this was sensibly compensated by the stronger illumination resulting from a greater aperture.

We are warranted in concluding from the foregoing experiments, that at least under some circumstances, there is a necessary correspondence between the virtual magnitude of the pupil, and the accommodation of the eye to distinct vision at different distances—and also that the observed effect of the stramonium did not depend chiefly, if at all, on the paralysis of any other part concerned in the adaptation. Whether any change in the iris generally conduces to, or even attends this accommodation in ordinary vision, is a point upon which physiologists are not agreed. The foregoing experiment seems to favour the affirmative.

Notwithstanding the various unsatisfactory conjectures respecting the uses of the ciliary processes, and the no less numerous hypotheses respecting the adjustment of the eye to distinct vision, this last has perhaps never been attributed to a change of *form* in the crystalline, produced by the *simultaneous* action of the different parts of the ciliary processes. An action producing lateral displacement has been supposed, which can effect no such adjustment, and is less likely to take place than a *general* contraction and dilatation, especially if we consider them as belonging to the erectile tissue.

In the eyes of a horse killed in health, and examined immediately after death, I found the attachment of these processes to the capsule of the crystalline very strong. It appeared to require more than ten times as much force to detach one of them, as to break an equal portion of the fibres of the crystalline, on whose contraction Dr. Young supposed the adjustment to depend. In the human eye, however, the attachment is generally considered rather weak. It is perhaps

strong enough during life to produce some little effect, and it is not necessary to suppose the accommodation to depend exclusively on any *single* structure, nor that the different parts of the eye which may conspire to produce this effect, exercise the *same relative influence* in different animals. The *stronger attachment* of the ciliary zone in some animals, *may indicate,* if not a different office, at least, a *greater share* in an office or function *performed by the combined action of several parts,* and by a different mechanism. I would hardly offer the above as a hypothesis, but merely state it for the consideration of physiologists.

But whatever hypothesis may be correct, it appears to me that the necessity of some adjustment has never been disproved, either experimentally or theoretically. It is true, that eminent physiologist, M. Majendie, found the image formed on the posterior part of the dead eye of an animal to be distinct, when the object was placed at different distances; and this experiment has been considered irreconcileable with any theory of adaptation. But unless the angular magnitude of the object were very considerable, the image would be too minute to allow the irregularity to be perceived in such an experiment. For in this instance, the image which occasions our perception is the image of an image, and has nearly the same ratio to the primary image as the latter has to the object; so that it appears to me very possible, that the distinctness of the object might be sensibly affected by a change of distance. such as would not sensibly affect the regularity of its image formed at the bottom of a dead eye, and regarded as an *object* of vision.

Theoretical arguments against accommodation are no less inconclusive. They have, so far as I have seen, overlooked the necessity of concentrating, upon a single point of the retina, the rays emanating from a single point of the object, and the constancy of their angles necessary for this effect. The difficulty is not removed, as has been supposed, by calling the eye a camera obscura; for this instrument also, when provided with a lens, requires adjustment to distance; and the reason why it may seem to "show objects distinctly for many miles round,"* appears to me to be, that at great distances, a given difference of distance produces a less difference in the obliquity of the rays, than an equal difference of distance in near objects. With objects at small distances, the defect would become instantly manifest. But on the other hand, adjust the instrument to near objects, and it would be of no avail that "an infinity of other rays flow from a distant object in all directions,"* unless those which flow

* See M. Majendie's Physiology.

from a single point, make with each other and with the cornea the same mean angles as those from a single point of a near object—which is impossible.

Moreover, the removal of a portion of the humours of the eye, or of the iris, dilates the image, by preventing the concentration of any pencil on a single point of the retina. The same effect is produced by any change in the requisite length of the axis. Hence the great extent of the vitreous humour is not only of "use to extend the field of vision,"* but is indispensable to the removal of the sentient screen to the precise distance at which the image is most perfect. This is a point which is not sufficiently appreciated by many physiologists, who speak vaguely also of the other humours, as merely "increasing the intensity of the light."*

In short, any change in the distance of the object, the refracting power of the eye, or the length of its axis, must produce a change in distinctness, unless a simultaneous change in two or more of these circumstances effects a compensation.

Now, different single parts, which by various physiologists and philosophers have been shown to effect this compensation, have by others been respectively either removed or placed in circumstances which nullified their influence, and yet the powers of compensation remained. These apparently contradictory results are reconciled by, and seem to require a less simple hypothesis. Such an hypothesis would be perfectly consistent with the rule of philosophizing, causas rerum naturalium non plures admitti debere, quam quæ et veræ sint, et earum phænomenis explicandis sufficiant; for more than one single cause has been proved to exist, yet no one of them has been proved fully adequate.

From some of the foregoing considerations, we might be induced to suspect that *night reading*, or any employment which requires the examination of minute and near objects with a faint light, and consequently during the expanded state of the pupil, has a tendency to produce myopia, or short-sightedness. For, during the obscurity of evening, the dilatation of the pupil necessarily resulting from the involuntary sympathy between the retina and iris is unfavourable to the distinct vision of near objects; but we nevertheless make an effort to see distinctly; an effort which may put in requisition to an extraordinary degree the voluntary powers of accommodation; and those parts in which these powers reside, and those upon which they directly operate may become permanently changed in their action and conformation, in consequence of a reiterated action in the former

* See M. Majendie's Physiology.

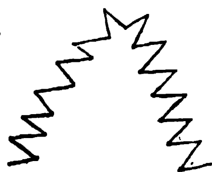
to a greater extent than is necessary during the light of day, when they enjoy in a higher degree the coöperation of the iris.

Appearance of the Tears on the Cornea.—Of all the proper objects of vision, (i. e. those exterior to the eye,) I have for many years believed that I had seen one of the nearest which could ever be visible to the eye of any animal; that is, the fluid secreted by the lachrymal gland, and rendered visible by the light refracted at its undulated surface, as it flows down the anterior surface of the cornea. This fluid contains visible spherical particles, or is mixed with some, partly perhaps from the meibomean glands. My experiments may be repeated in the following manner.

If any person, with his eyelids nearly closed, looks toward a window, or any luminous object nearly stationary, the luminous space will appear to be filled with circular bright spots, surrounded by dark rings. Some of these circles are much larger than others, and are either single,, double, or multiple. An undulated appearance is frequently presented, each wave being either continuous, or composed of, or containing a chain of spherules. All these objects move slowly downwards in a vertical direction. That this motion depends on gravity, I assured myself, by giving to the head various inclinations, and finding the general direction of the motion still vertical as before. I say the general direction, for in whatever position the head is placed, there are occasional instantaneous motions through very short spaces, such as would be produced by slight involuntary relative motions of the eyelid and eyeball, impressing on that part of the fluid contiguous to the tarsus, a motion which would be necessarily transmitted to the whole visible lamina, and produce in it a simultaneous displacement. That these slight motions are of this nature is verified by observation, for at any one time they agree in the instant of their commencement, in their direction, duration and extent, for all those objects of which we have been speaking. There are, however, other appearances which present themselves in the same field, but with which those just described, must not be confounded. They are less distinct points, with rapid and irregular motions, and resemble electric sparks. It is also necessary, in order to see no motions of the fluid on the cornea, except those which I have described, to guard the eye against voluntary motions, by directing the optic axis as steadily as possible toward some fixed point in space. With these precautions in making the observation, each visible portion of fluid will be seen finally to pass the inferior limit of the field of vision. This constant relation to the line of gravity in every position of the head, proves these objects to be some gravi-

tating matter. The perpetuity of the phenomenon in the erect posture, forbids the supposition of its being in the humours; and the luminous centre and dark annulus of the circular spots, and the luminous middle and dark parallel sides of the linear ones, as well as the varieties in the appearance and number of the rings, (for more than one is frequently visible,) present the same appearances as perfectly transparent fluid spherules and waves on the surface of the cornea might produce, agreeably to the laws which regulate the transmission of light through thin plates of variable thickness. Finally, these appearances are more obvious, when from weakness of the eye or any other cause, the lachrymal secretion is more abundant.

Hemiopsis.—I have twice experienced a partial insensibility of the retina, attended by some peculiarities not recorded in Dr. Wollaston's cases. At each time, objects and parts of objects, situated on the left side of the visual axis, were, for about half an hour, either indistinctly seen, or totally invisible; for instance, the left side of a printed page, of a line, and even of a single word, was not perceived whilst the eyes were directed to the middle. There was consequently an insensibility of the right half of each retina. In both cases, a glimmering zig-zag, or broken line, appeared to be situated before the eyes above and to the left of the point toward which their axis were at any time directed, and as near as could be determined, in that part of the field of vision which was most completely obscured. In the first case, this line had an angular appearance, being composed of two lines, (see figure,) meeting at an angle of about 60°. It moved very slowly upwards, and to the left, and disappeared about the same time that perfect vision was restored. In the second case, the line resembled one of the branches of the former, was, like it, composed of numerous short lines, but its general course was nearly straight and horizontal. Its left extremity became gradually more and more elevated, and in this oblique position the imaginary object finally disappeared. The whole space occupied by these objects, subtended a visual angle of about 20°. Their coëxistence with the hemiopsis may be worth recording, as similar observations may possibly throw some light on the pathology of both. It is well known that Dr. Wollaston has inferred from the latter a semi-decussation of the optic nerves.



Schenectady, Dec. 1830.

ART. X.—*Observations on the Gangrenous Sore Mouth of Children.* By JESSE YOUNG, M. D. of Chester, Penn.

IN the medical journals of the day, I frequently see descriptions of a disease, under the different names of *cancrum oris; gangrenæ oris; gangrenous sore mouth; humid gangrene of the lips; gangrenous erosion of the cheek, &c. &c.;* but perhaps there cannot be a more *practical* name, or one that conveys a more accurate idea of its appearance, at least, than that applied to it by Dr. PARRISH, viz. "A disease resembling the effects of mercury." From the descriptions given, or rather from the result of cases published, it appears to be very frequently fatal, under all the different modes of practice resorted to by different practitioners; and that no means have been heretofore used, which have proved even generally successful, with the single exception of the *sulphas cupri.* This is said to have been particularly efficacious; and of the fact, there can be no just reason to doubt, from the number and respectability of the vouchers in its favour. To add one other article, which has been found peculiarly serviceable, and which has not been publicly recommended, so far as my information extends, is the object of the present communication.

In June, 1824, a length of time before I knew of the sulphas cupri having been recommended, and before I had ever seen the disease, I was requested to visit the son of J. W., aged four years and two or three months, with a sore mouth, which the parents had been endeavouring to combat for about a week, with domestic remedies; but in spite of their efforts, it continued to grow worse. On visiting him, it was with difficulty I could be convinced that the child was not labouring under a severe mercurial salivation; there being several sores in the roof of the mouth, and in the cheeks, which had exactly the appearance of mercurial sores; the saliva flowed constantly from his mouth, and his breath exhaled an abominably fetid odour. On being assured that he had taken no mercury by their instigation; and that it was impossible for him to have obtained it without their knowledge, I gave up the idea of mercury having produced it, and concluded, that it must depend on some peculiarly unfavourable state of the stomach and intestinal canal. I accordingly prescribed an emetic of ipecac. followed by *four grains* of calomel, to be succeeded in three hours by oleum ricini, so as to operate actively on the bowels; using a gargle, or wash for the mouth, of sage tea, alum, and honey. On calling next day, the symptoms were no more favourable in any respect; a slow, irritative fever, of a

remitting character, which had been noticed before my attention was called to the case, appeared rather to increase than otherwise, although the medicine yesterday operated freely. During the operation of the cathartic, the evacuations were dark-green, and very offensive—ordered charcoal and magnesia in equal portions, a teaspoonful every four hours, and tincture of myrrh as a local application to the sores. Next morning found the mouth worse than before; it was now very much swelled, the sores enlarged; the fever increasing with a circumscribed redness on the right cheek, the left pale; the pulse small, frequent, and irritable; the breath excessively offensive. The bowels have been moved three times pretty freely, discharges still green and offensive. Continued the magnesia and charcoal, and added sulphas zinci to the tincture of myrrh as a gargle.

June 15th. Two of the larger sores on the palate look greenish, and one on the cheek has the same hue; the patient pale and languid, bowels relaxed, but the evacuations are more favourable in appearance and odour. Requested tar water to be used as a wash at intervals, between the application of the tinct. of myrrh and sulphate of zinc, and to omit the magnesia and charcoal.

16*th.* The sores look darker than yesterday, and I began seriously to apprehend a fatal result; particularly so, as I heard this morning of the death of a child in the neighbourhood, from what was said to be the same disease. Almost in despair of curing, I now ordered a gargle, or wash, of *eight grains of deuto-chloride of mercury*, in an ounce of water, the sores to be cautiously but accurately touched three times a day, by means of a swab; and a table-spoonful of the decoction of cort. Peruv. every four hours, to be commenced after moving the bowels with castor oil. From this day the patient began to mend, and by the 20th all the sores had sloughed; some of the smaller ones had healed up entirely, and the large ones had a florid, healthy appearance. The solution was now discontinued, and the mouth was frequently washed with mucilage of the slippery elm, (*Ulmus Americana.*) continuing the decoction of bark; and on the 24th of the month I dismissed the patient, all the sores nearly healed. Two of the children in the same family were subsequently attacked, but there was not the least difficulty found in curing them; commencing at once with the mercurial solution, after evacuating the first passages by an emetic and cathartic of calomel and castor oil.

This was decidedly the worst case of the kind I have ever met with, which I attribute in a great measure to the delay occasioned by the use of inefficient means in the beginning.

It has not been my lot to have had a very extensive experience

in treating the disease, but since the above, I have seen about thirteen cases, (here I would be understood as distinguishing between the disease in question, and the aphthous sore mouths of children, so common, and which mothers generally manage themselves,) in every one of which, an emetic of ipecacuanha, mostly followed by a cathartic, sometimes of calomel, and frequently of castor oil alone, or of magnesia, were exhibited at first; these were followed by the decoction of bark and the solution of corrosive sublimate, varied in strength from two or three, to eight or ten grains to the ounce, according to the circumstances of the case, and the sensibility of the sores to its impression. My success by these means has been so prompt and complete, that I have not tried any other article since first using these. That there may occur cases in which their controlling power may not prove so availing as I have found it, I can scarcely entertain a doubt; but I must say, that I have not in any one instance been disappointed in my expectations; but that every case in which they have been used, appeared to improve from the very commencement of the treatment.

When I first used it, I was not aware of its ever having been employed before in the affection; but since, in conversation with my friend and preceptor, Dr. Gideon Humphrey, on the subject, he informs me that he has been in the habit of using it for years; his formula is tr. myrrh, ℥j.; deuto-chloride merc. grs. iv. to vj. to be applied three times a-day, reducing the strength *pro re nata*, by the addition of water. His experience has been extensive, and his success uniform, and he assures me that he meets the disease with as little concern, and a much greater certainty of curing it than he does many other of the less serious affections of children.

It may not be improper to observe, that all the cases which have fallen under my observation have occurred in children between two and five years of age; that the district of country in which they occurred was hilly upland, three to five or six miles distance from marshes, but that a majority of them occurred during the summers and autumns from 1824 to 1828 inclusive, a period at which remitting and intermitting fevers were very prevalent, although I do not recollect the disease in question having appeared in any case as a sequel to, or having been preceded by an attack of autumnal fever.

Chester, Pa. Jan. 15, 1831.

MEDICAL EDUCATION AND INSTITUTIONS.

Art XI. *An Account of the Origin, Progress, and present state of the Medical School of Paris.*

THE medical school of Paris is, without doubt, one of the most ancient in Europe. The precise date of its foundation is still, however, a matter of dispute among antiquaries; some affirming that it may be traced to a period anterior to the establishment of the university of that city, or of the different schools which subsequently received the form and charter of an university; whilst others maintain, that medicine was not taught as early at Paris as at Montpellier, and consequently not until long after the time assigned by the former writers. Although it does not comport with the plan of this article to enter very fully on this historical point, yet we may be allowed to remark, that from various documents at present before us, and from several old writers upon this subject, it appears, that Charlemagne, in an edict dated from Thionville, so early as 805, ordered that pupils should be sent to Paris from various parts of his kingdom to study medicine, and that this branch should be added to grammar, arithmetic, music, dialectics, rhetoric, geometry, and astronomy, which before constituted the only ones taught in the schools he had already established at Lyons, Metz, Fulde, Hirshau, Reichenau, and Osnabruck. Riolan, in a singular little volume on the two schools of Paris and Montpellier, quotes in proof of the greater antiquity of the former, the writings of Hemerus, (*De Academia Parisiensi,*) who says that at a very early period "physicians taught in a house situated in the square of Notre Dame, between the Hôtel Dieu and the Bishop's house." In addition to this, he remarks that Rigordus, first Physician to Philip II. in his history of that monarch, says that in his time the physicians of Paris, taught fully and perfectly all the branches of medicine. The following remarks deserve to be quoted in the original. So early as the year 1163, "les médecins enseignoient avec un tel *ravissement* et contentement des auditeurs, que les religieux sortoient de leurs convens pour venir entendre les leçons; ce qui obligea le Pape Alexandre III., en un Concile tenu à Tours, de commander aux religieux, sur peine d'excommunication, de se retirer dans leur monastères avec défense de ne plus aller aux leçons des physiciens; ainsi appeloient ils les médecins."

In his historical sketch of the faculty of Paris, HAZON does not assign to this school so ancient an origin as others, as we have seen, have done; for, after remarking that it was naturally comprised in the association of savans, who, after their emigration from the monastic cloisters, and particularly from the episcopal one, assembled, each for his particular object or branch, under the name of study of Paris, he adds, "Before this fortunate revolution, which took place towards the middle of the twelfth century, medicine in France was nothing more than a blind empiricism. Under these circumstances the *physicians* who united in the study of Paris, and were there formed into companies, commenced teaching the various branches of their profession in that city."

Be the antiquity of the school of Paris, however, what it may, medicine, considered in its practical application, and as a branch of instruction, was before this period, in France, as in the rest of Europe, confined to the monasteries. The monks of the Abbey of St. Victor, practised we are told, the principles of the healing art, long before France had emerged from a state of barbarism. The commandery of the *Petit St. Antoine*, whose hospitable monks devoted themselves to the treatment of epidemical diseases, may also be cited as a nursery of medical instruction. But these monasteries in cultivating the medical science, only preserved the ancient apanage of all monastèries; the healing art being in all practised with success,* and considered an act of piety and charity, and as a duty attached to the religious profession. The school of Salerno, indeed, founded by the Benedictines, only revived the science of medicine, which had become lost amid the confusion of the dark ages. Before the establishment of this school the medical art was only the results of chance, and of the experiments of a blind empiricism. At that time no physician could bleed a female of noble birth, except in the presence of a relation, or of servants, under penalty of ten sous. The physician was obliged to give security before undertaking a cure, and if he did not succeed he was condemned to damages and interest. For a long while kings chose their physicians only from among the inmates of the cloisters. Even by the immediate predecessors of Charlemagne, education was much neglected. The princes of that period had, it is believed, schools established in their palaces for the instruction of the young nobility; but this plan was not sufficiently general and regular. The great monarch afore-men-

* Hodoaw. Chr. Rec. des Hist. de France, vol. 8, p. 229. Lebœuf. Hist. de la ville et du Diocese de Paris, vol. 2.

tioned, established a system of education better calculated to diffuse instruction through the various classes of society; but the duties of teaching continued as formerly to be retained by the members of the clergy. The consequence was that a much greater importance was given to theology than to some of the more useful branches; a plan indeed which accorded well with the taste of Charlemagne, and was therefore encouraged by him. As physicians and philanthropists, however, we should not contemn the system he so zealously enforced; since the edict to which we have already alluded shows the importance he attached to professional knowledge, and the desire he felt of propagating the study of medicine. In the twelfth century the savans of Paris, formed the determination of constituting themselves into an association, and obtained permission that the schools incorporated in the manner above noticed, should assume the rank of, and be chartered as a regular university. The precise period of this reörganization is not known; but we are told by Mathieu Paris, that Jean de la Belle, who was elected abbe of St. Alban, in 1195, was educated at Paris, and had been associated to the body of Masters—*ad electorum consortium magistorium.*

Soon after this epoch the university was placed under the charge of a chief, mention of whom is made in an ordinance issued by Philip Augustus in 1200. By the same ordinance the university was endowed with many privileges and prerogatives. The studies were now conducted on a more regular and systematic plan, and instead of theology and the arts being the sole objects of interest, medicine began to assume the form of a science, and to be taught by regular professors. It was about this time that the faculties, in the sense we apply to that term, were first established. They were three in number, theology, law, and medicine; the professors, as well as the whole body of teachers attached to the university remaining ecclesiastical; and the pupils being like those of all other branches, clerical. Before this period the only division that had been made of the mass of pupils attending to the various branches taught in the schools of art, was into nations—a division which still continued even after the formation of the faculties. These nations consisted of individuals of the same or neighbouring countries, including occasionally a few from more distant districts, who, whatever might be the nature of the studies for which they had resorted to Paris, united together into a body, and lived in separate buildings erected for that purpose and denominated colleges. Each of these nations framed its own laws and regulations, was governed by officers of its own choice, and did not necessarily keep up a communication with the other nations, except

when they assembled together to constitute the great council of the university, and to transact business of a common interest. At an early period of their formation, (the exact period is not known, some writers referring it the reign of Charlemagne, others to those of Louis the seventh and of Philip Augustus,) the number of these nations was very limited, consisting, as is affirmed by some, of only two, the French and the English. In the course of a few years they increased in number, so that at the close of the thirteenth century they amounted to four, those of France, Picardy, Normandy, and England. They ranked in the above order. The first, besides the French, included Italians, Spaniards, Greeks, and Orientals; the last the Scotch, Irish, Poles, Germans, and all other northern students. Each nation was divided into provinces, and each of these into dioces. The provinces had each at their head a dean. These formed the ordinary council of the procurator or head of each nation. The procurators, in their turn, constituted the ordinary council of the rector, who was chief officer of the university. Besides the ordinary council just alluded to, there was a great council, consisting of the rector, procurators, and deans. Of the causes which led to the change in the division of the pupils, and to the formation of the faculties, we need not here occupy the attention of our readers, and must refer them, for all that can be desirable to know on that head, to Dr. DAVID JOHNSTON's work on education in France. It will be sufficient to remark that the faculty of theology was the first formed, and that that of medicine was soon after modelled upon the former, since it is proved that so early as 1270 one of its members was punished for contravening one of the statutes. Shortly after this, the faculty of law, (canon,) was similarly organized. About the year 1281, the three faculties of theology, medicine, and canon law were confirmed in all their rights and privileges, and thus assumed equal rank with the four nations already mentioned, which had not ceased to exist, and now received the name of faculty of arts.*

* There was at that time a curious custom, which was continued for a long time; it consisted in giving to each nation and faculty an honorary title. This was not merely made use of in common parlance, but was retained in all acts and statutes. What these titles were may be seen by the annexed list of deans and procurators of the different faculties and nations.

J. Mullot, Decan. *Sacræ* facultatis Theologiæ; Ph. De Buisine, Decan. *Consultissimæ*, facul. jur. Canon; Guido Patin, Decan. *Saluberrimæ*, fac. med,; J. Doge, *Honorandæ* nationis Gallicæ, Procurator; G. De Lestoc, *Fidellisimæ* nat. Picard. Procurator; Th. Le Petit, *Venerandæ*, nat. Nor. Procurator; Mac Namara, *Constantissimæ*, nat. German Procurator.

The medical faculty of the university, which constitutes the principal object of this article, attained considerable reputation, even soon after its definite organization, and was regarded, for a long time as the best in Europe, with the exception of that of Montpellier. Students flocked to Paris to attend the lectures of the professors, and we have already seen the effect produced by them on the young literati of the times, who were no where to be found except among the inmates of cloisters and monasteries. The founders of this school were under the impression, that in order to establish a faculty capable of imparting solid instruction, and calculated to do honour to the great metropolis in which the school was located, it was necessary to have recourse to two measures. 1st. To insist on the necessity of following nature agreeably to the views expressed in the writings of HIPPOCRATES and GALEN, and 2dly, to profit by the labours of the two more ancient schools of Cordova and Salerno. To accomplish these objects they had recourse to the various translations then in circulation, of the writings of the two fathers of medicine—the original texts having been carried away from the continent to Arabia by St. Benedictus and others—as well as to the writings and commentaries of the professors of the celebrated schools we have just mentioned. It was not until about the middle of the fifteenth century, however, that these efforts to raise the reputation, and establish the preëminence of the school of Paris, were crowned with full success. In their laudable zeal to that effect, the professors were much aided by the discovery of printing, which took place about this period, and by the protection which the school of Paris, as well as every other in the kingdom, received from King Francis the first, who, by his munificence, induced savans from all parts of the world to collect in the capital of his kingdom. From this period to the beginning of the seventeenth century, the progress of the school was rapid. During that period translations from the origiginal texts were made, and commentaries on these, as well as original works, written in accordance with the principles of the Hippocratic school, were published. As early as 1532, JOANNES CAMPEGIUS, in an epistle cited by his uncle SYMPHORIANUS CAMPEGIUS, physician to Charles the eighth and Louis the twelfth, speaks in terms of high praise of the learning of Parisian physicians in the Greek language and in medical science. Riolan, from whom we derive this information, states, that in 1551, CASATUS, a learned Scotch physician, expressed a similarly favourable sentiment respecting the school of Paris. LORRY, in his preface to ASTRUC's history of the school of Montpellier, says of the beginning of the seventeenth century, "this era is that of the true

glory and lustre of the faculty of medicine of Paris; no body of physicians has produced such skilful interpreters, such illustrious commentators of our first masters as this faculty. The spirit of observation, according to the Hippocratic method, drew forth from its members works still precious at the present time." Were other testimony of the high and merited renown of the school of Paris necessary, it might be sought for in the first book of BAGLIVI's work on the practice. It will be sufficient in order to show, that the praise contained in these quotations is not exaggerated, to remind the reader, that it was at the period in question, that BOUVARD, DEGORRHIS, BRESSOT, VASSE, FERNEL, COP, GONTHIER, D'ANDERNACK, HOLLIER, GOUPIL, D'ALLEMAND, the two DURETS, BALLOU. AKAKIA, &c. all names of the highest renown in the annals of our profession, flourished at Paris, and took an active part in promoting the progress of medical knowledge, and raising the reputation of the school to which most, if not all, of them were attached.

As regards the period at which the faculty of Paris began to cultivate with the greatest success the various branches of medical science, and the progress these made in that city, it would be a waste of time to say much in this place. A few words on the subject, however, may not be misplaced here, inasmuch as we shall thus be able to present a view of the state of the school previous to the French revolution, as well as to notice the origin and progress of the college or school of surgery, which grew out of that of medicine.

The first lessons given in anatomy were for the instruction of the barbers and surgeons. To the former they were delivered in French: to the latter in Latin. This occurred in the years 1498 and 1499, (PASQUIER, Rech. sur la France, Liv. 9, Chap. 31.) We need hardly state that previous to, and even at the period we have mentioned, this branch was in a state of infancy, and that these first attempts towards the delivery of a course of instruction in it must have met with but a slender success. This does not in the least detract, however, from the praise to which the school of Paris is entitled on that head, since the lectures delivered on the same subject in other universities of Europe, do not appear to have been superior, or even as good as those of the former. In the course of a few years, works were published on this branch, disputations were carried on, and many discoveries made. Nevertheless it was not until the commencement of the sixteenth century that anatomy was properly taught. The names of CHARLES ETIENNE, GONTHIER the master of VESALIUS, RIOLAN, FAGAULT, GOURMELIN, and particularly of SYLVIUS, who, although a graduate of Montpellier, may, in consequence of his long

residence in Paris, be classed among the former—most of whom flourished in this or the commencement of the succeeding century, will, owing to the zeal they displayed in their dissections, and to the degree of perfection to which they carried this important branch, ever live in the memory of anatomists, and reflect the highest honour on the city and faculty of Paris, To these anatomists successively followed LITTRE, DUVERNEY, WINSLOW, HUNAN, PETIT, LIEUTAUD, and VICQ D'AZYR, who carried the science to still greater perfection than had been done by their predecessors.

Anatomy having much improved, the functions of the different parts of the body were explained in a less conjectural and speculative manner than had hitherto been done. Yet physiology cannot be said to have considerably improved at Paris previous to the middle of the seventeenth century, when, the circulation of the blood having been discovered, and physical and mechanical science having made great progress, the former assumed a better direction, and new, though not always correct explanations of the phenomena of life were offered. The books containing these physiological speculations, although no longer read but by the erudite, may be regarded as productions of great interest. In the progress of time, however, physiology emerged from the obscurity in which the Gallenical doctrine had long held it enchained, and a BORDEU, a FABRE, a DE CAZE, a VICQ D'AZYR, and others, gave to the physiological school of Paris an impulse which has led to the most beneficial results, and ensured to it a reputation equal to, if not greater than that enjoyed by any other.

Nor was the success of the members of the Parisian school less conspicuous in surgery. In the origin, both medicine and surgery were taught under the name of physic. When universities were established, the same name for both was retained in Italy, while the term *médecine* was conferred upon them in France. In the twelfth century the church prohibited its members from performing operations, on the plea that a priest should entertain a horror for blood. Hence the physicians who wished to continue the practice of the art, were compelled to leave the faculty. In this century and the succeeding one, surgery was left almost entirely in the hands of the barbers. A floating banner over three pewter basins, formed the significant sign of the barber-surgeons. Even women performed surgical operations, provided they could obtain permission to that effect from the king's surgeon at the Chatelet. The surgeon-barbers were not members of the university, which would not even grant them the title of pupils. In truth, they were very ignorant, all their art consisting in setting broken bones, in bleeding, in cupping, and in shaving. In addition to this, they some-

times kept warm baths, for the accommodation of invalids and the public generally. They were often at open warfare with the regular physicians, who reproached them with selling medicines and recipes not approved of by the faculty.

As early as 1272, several surgeons, headed by Pitard, had, as we have already hinted, separated from the faculty, in order to institute a college, which though distinct from, yet remained under the jurisdiction of the faculty. The members of this college being considered as lay members, (those of the university were still regarded as clerical,) had permission to marry, enjoyed all the privileges possessed by the masters in surgery, and wore the same costume. Soon after, Lanfranc joined this college and became one of its most distinguished members. The college was placed under the patronage of the St. Come and St. Damiens. From their costume the members were denominated *surgeons of the long robe*, in order to distinguish them from another set of surgeons, who were called *chirurgiens de robe courte*, and were formed into a *community* under the direction of the head barber of the king, J. Pracontal. They were obliged to study medicine for two years, and to submit to strict examinations. According to Pasquier, (Rech. de la France, ch. 30, p. 817,) the confederation of surgeons was only instituted by an edict of Philip the Fair, in 1311, but there are not wanting some writers who prefer to this opinion, that of the author of the *Index Funerius Chirurg, Parisiensium*, who refers this establishment to St. Louis. Be this however as it may, the college of surgeons, from the order given by Philip, which enjoined on all the surgeons of France to present themselves for examination before it, and assimilated its members to those of the faculty, as well as in consequence of the practical success of its members, and the suffrages it obtained from the academy, had to sustain a war with the faculty. In this dispute the latter obtained some advantages over the college, and exacted a sworn promise from the bachelors, before giving them a license, that they would never practice surgery; yet the members of the college became more elevated in repute and standing than the barbers and *stuvists*, who, by an act of parliament dated 1425, were prohibited from performing operations. The faculty, however, who had obtained an edict from King John the Good, in 1352, prohibiting all who had not procured a license, such as apothecaries, students, and mendicant friars, from practising the healing art, took the defence of the barbers, from a spirit of revenge against the college, and taught them the practice of surgery. Complaints were made in 1491 and 2, but to little effect; for the faculty continued, as heretofore, to deliver lectures on anatomy for the benefit of the barbers. The surgeons on their part reiterated their

complaints, and obtained that the public dissections should be entrusted to them, and that each among them who would pay an annual sum of thirteen sous to the faculty, should be entitled to a pre-eminence over the barbers. But all their complaints were left unnoticed, and in 1505, the faculty still nourishing their inveterate hatred of the surgeons, declared the barbers *children* of the faculty. They were enregistered as such, engaged themselves on oath not to make use of internal remedies without calling in a member of the faculty, and submitted to examinations before obtaining the degrees of master. They were now no longer designated by the term *Barbitonsores*, but by the less dishonourable one, given them by the faculty, of *Chirurgici a tonstrina*, or of *tonsores chirurgici.*

In 1515, the college, while under the presidency of E. BARAT, applied directly to the university, and obtained the abrogation of most of the privileges possessed over its members by the faculty of medicine, and an edict of the university immediately followed, by which the surgeons of Paris were declared members of the faculty. About the same time, WILLIAM VAVASSEUR, first surgeon to Francis I. obtained the separation of the corporation of surgeons from that of the barbers, and also a decree by which every master in surgery was enjoined to present certificates of his knowledge in Latin and of his skill in the science of dialectics before he could obtain a license to practice. By these measures the college of surgery was raised to an equal rank with the learned schools. It finally obtained permission to confer degrees of master, bachelor, licenciate, and doctor in surgery, and obtained from Henry II. prerogatives equal to those enjoyed by the faculty. In 1557 the decree of 1515 was, however, annulled through the efforts of J. DUHAMEL, dean of the faculty, and the surgeons were once more forced to submit to the examinations of the latter. In 1577 the college again obtained a confirmation of their privileges and of the right of conferring academical honours. Two years after, the faculty endeavoured to divest the college of the independence thus granted to it; but failed, in consequence of the former receiving from Pope Gregory XIII. an *indulto* similar to that sent to the university. The college now prospered so rapidly, that in 1506 it felt powerful enough to compel the barbers to call in a regular surgeon for advice in all severe cases. All these privileges were confirmed in 1602 by Henry IV. and in 1614 by Louis XIII.

The eighteenth century is really remarkable for the number of brilliant discoveries and improvements that were made in surgery. The number of men of genius and talent who flourished in France during that period is almost inconceivable; and it is no small praise

to say, that it was at this time the weight of authority in matters of science gave way to that of reason and experience.

In the latter half of the century to which we here refer, two individuals equally distinguished by their talents and the rank they occupied in the profession, BIENAISE and ROBERDEAU conceived the praiseworthy design of promoting the cause of the surgical science. They established and maintained, at their own expense, in the schools of surgery, which, from a variety of causes were in great measure deserted, several chairs for the demonstrations of various branches. While this amelioration was effected in the regular surgical schools, Louis XIV. reörganized, by a declaration dated December, 1671, the royal school of surgery of the garden of plants, of which we shall speak by and by, and very wisely ordered that henceforward the teaching of that branch, which had been claimed as a privilege by the doctors of the faculties of Paris and Montpellier, should be entrusted to a surgeon. DIONIS was appointed to the chair of anatomy and operative surgery,* and gave éclat by his skill and reputation to the establishment.

At the solicitation of MARESCHAL and LAPEYRONIE, the king, by letters patent of the month of September, 1724, ordered the establishment in the college of St. Come of five chairs, the incumbents of which were charged with teaching all the branches of anatomy and surgery. To these chairs Lapeyronie added a sixth, which he himelf endowed, and the professor of which was called upon to deliver two courses on midwifery; one for surgeons, and the other for midwives. At his instigation also a number of adjuncts equal to that of the demonstrators were appointed, the expenses of whom he offered, in the most liberal manner, to defray himself. The faculty did not limit itself at this time to protesting against the independence of the college, but even attempted to overcome it by force. We find in Quesnay a ludicrous account of the assault which was made by the doctors of the faculty, aided by their pupils, and headed by the dean; the doctors being all dressed in their robes and caps, the dean decorated with all the insignia of his high office, and a professor carrying a skeleton! When they reached the door of the anatomical room of the college, an officer or beadle struck with force against it, and cried out "*voici vos seigneurs et maitres de la faculté qui viennent réclamer le droit de vous instruire:*—here are your lords and masters of the faculty who are come to claim the right of instructing you." They are come, adds the witty author, to seize upon the

* Dezeimeris, Journal Hebdomadaire, Vol. 8, p. 307

amphitheatre which you could build only for them, they carry to you all the knowledge contained in their books. But from this attack no other results were obtained, than exciting the laughter and hisses of the populace, who *serenaded* in this manner the infuriated professors all the way back to their homes.

In 1743, (23d of April,) the king, by a declaration drawn up by DAGUESSAU, and which is in every way worthy of that celebrated man, ordered that the society of surgeons should be finally cleared of the community of barbers, by an alliance with which it had been so long disgraced. Academical degrees were instituted among the surgeons, the pupils were required, before being allowed to graduate, to present testimonials of having received a liberal education, and to undergo several strict examinations in the different parts of that branch. Shortly after, by an arrété of the council dated the 4th of July, 1750, the *Ecole Pratique de Chirurgie* was established. This school, which was intended, as its name imports, for the instruction of pupils at the bed-side of the sick, was remodelled in March, 1760, and afterwards established in a small and special hospital, known under the name of *Hospice de Perfectionement*, and which was founded by an edict of the king, dated December, 1776. It was in this school that DESAULT commenced his career as a clinical professor, and that CHOPART taught with such distinguished success.

But to return from this long digression to which we have been led by the circumstance, that the college of surgery at Paris, formed ultimately a distinct school, independent of the university, and as such merited more than a passing notice. Following at an early period the example set them at Montpellier, by GUY DE CHAULIAC, who had already published a treatise on surgery, Lanfranc, (a native of Milan, but long settled in Paris,) AMBROSE PARE, MARESCOT, CHARPENTIER, FAGAULT, GOURMELIN, not to speak of other individuals of less celebrity, published many valuable works,—the two last, treatises on this branch. After these came LAPEYRONIE, J. L. PETIT, MORAND, LEDRAN, GARENGEOT, LA FAYE, VERDIER, PIBRAC, HEVIN, FABRE, LE CAT, FOUHERT, BORDENAVE, SABATIER, PUZOS, HOUSTED, and LOUIS, all of whom were members of that celebrated academy of surgery, of which Paris has so much cause to be proud, and which was formed about this time.

Paris may also be cited for the success with which midwifery and its accessory branches were cultivated by some of the disciples of the school, and other individuals not connected with the latter, but residing and practising in that city. At first abandoned there, as in every other part of the world to ignorant hands, this branch began

about the sixteenth century, to be cultivated by well-informed surgeons. Without stopping to enumerate several early essays on this subject, published by authors long since forgotten, it will be sufficient for our present purpose to mention as deserving a high commendation—viewing the period at which they were written—a treatise by GUILLEMEAU, "*De la grossesse et Accouchement des femmes, du Gouvernement d'icelles, et moyens de subvenir aux accidents qui leur arrivent*," as well as a dissertation on impotency added to that work, by CHARLES GUILLEMEAU, the son of the preceding author, and who for a time was dean of the medical faculty. At a subsequent period, the writings of MAURICEAU, PUZOS, VIARDEL, DE LAMOTTE, LEVRET, and particularly of PETIT and BAUDELOCQUE, attest sufficiently the early period at which midwifery began to be properly cultivated at Paris, and the improvements made in the philosophy of that branch, previous to the revolution, by the faculty and practitioners of that city. Let it not be forgotten, moreover, that about the middle of the seventeenth century the instruction of midwives was begun, at their own request, and became the source of an establishment which has proved of the highest utility to the city and provinces.

Pathological anatomy was later in being studied with success at Paris than the preceding branches; for, with the exception of BAILLOU, AMBROSE PARE, FERNEL and PINEAU, and notwithstanding the example set them by EUSTACHIUS and MORGAGNI in Italy, BONETUS in Switzerland, DODONEUS, DONATUS and KENTMAN in Germany, no writer had there published any thing of much value on that important subject, until the time of LITTRE, DUVERNEY, DIONIS, and L. PETIT. Soon after, however, LIEUTAUD, VICQ D'AZYR, and some others, published works of considerable interest on that branch, and were the honourable predecessors of PORTAL, BICHAT, BAYLE, LAENNEC, &c.

BELON, a physician of Paris, actuated by an unusual degree of zeal in the prosecution of botanical knowledge, undertook long and perilous voyages, with a view of enriching this department of science. He was protected by Fernel, who at that period enjoyed a great and merited favour, and was aided by the liberalities of Henry III. Independently of BELON; BARRELIER, FAGON, TOURNEFORT, JUSSIEU, VAILLANT, and other distinguished naturalists of Paris, procured in the four quarters of the world, innumerable specimens of natural history, and enriched the catalogue of the materia medica by the addition of many articles of more or less value. The establishment of the royal garden of plants by LA BROSSE and FAGON, which was effected in the reigns of Louis XIII. and XIV., contributed in promoting the progress of botanical knowledge and of the materia medica; since

by its means all the treasures of the known world were collected in a small space; while learned professors, appointed with the approval and at the recommendation of the faculty of medicine, studied and explained to a numerous class, the uses and properties of the various objects which that garden contained.

Astrology early met with a decided opposition on the part of the faculty of medicine of Paris. The "*Dispensatorium Galinico-Chymicum*," of RENODEUS, a work more commendable for the erudition it displays, than for the judgment and taste with which it was composed. is sufficient to indicate that at an early period pharmacy and materia medica had attracted the attention of Parisian physicians.

Ipecacuanha was, as is well known, introduced in Paris as a therapeutical agent, by a pupil of the school of that city, HELVETIUS, and it was extended thence in 1686, to every part of Europe. Peruvian bark was used in the case of Louis XII. and soon after employed with success by many physicians and professors of Paris. The works of J. A. HELVETIUS, the son of the preceding physician of that name, and of MONGINOT, show the success with which this medicine was there employed and compounded. As regards mineral articles, it is known that the physicians of the Parisian school employed them with as much success as those of any other, and prepared them as well as the state of pharmaceutic chemistry would allow. The different preparations of antimony and mercury, met at their hands a cordial reception. The reverse of this is not to be argued from the fact, that the faculty of the University procured in the year 1566, a decree of parliament against the former of these articles—that BERNIER, one of its members, was expelled from this school in 1609, for continuing to resort to it in his practice, and that a few years anterior to this, the celebrated THEODORE TURQUET of Mayerne, was persecuted for a similar offence. For such a prohibition was founded on the abuse made of this remedy, and on the improper manner in which it was prepared and administered; and it is well known that many physicians of eminence continued to use it, and to take openly and fearlessly its defence. Be this as it may, at a later epoch many treatises on the materia medica were published, the most esteemed of which about the opening of the revolution, were those of LIEUTAUD, and DES BOIS DE ROCHEFORT.

In pathology and the treatment of disease, much had been written, but little of decided advantage had been effected by the professors of the medical school, and by the physicians of Paris, up to the moment of the reörganization of the faculty and school; yet the writings on those subjects of Lieutaud, Bosquillon, Quesnay, Des Bois de

Rochefort, Raulin, Portal, Lorry, &c. not to mention those of the older physicians we have already noticed, must, considering the state of science at the period at which they were composed, be regarded as productions of uncommon merit.

Clinical medicine was not taught at Paris until a short period prior to the revolution; the merit of first setting the example in France of delivering regular lectures on this branch, being indubitably due to Des Bois de Rochefort, chief physician of the hospital of La Charité, where he was succeeded in 1788, by the celebrated Corvisart. It is proper to remark, however, that although, as we have just stated, the necessity of teaching medicine at the bed-side of the sick, was not felt in France until the time of Des Bois de Rochefort, the surgeons who flourished in the preceding age, although unauthorized, or rather uncommissioned to that effect, had been in the habit of bringing along with them at their visits, or to their operations in the hospital, their private pupils, their friends, and strangers, whom the anatomical lectures of Duverney, Littre, Mery, and Winslow, attracted at Paris. Such was particularly the case with Saviard at the Hôtel Dieu; with Mareschal and the lithotomist Tolet at the Charité, and with Mauriceau in the lying-in wards of the former of these hospitals.*

Whilst such were the advances made in the different branches of medical science by the members of the faculty and the physicians of Paris, chemistry remained in arrears, not so much in consequence of the indifference in which it was held by the faculty, as owing to the state of knowledge at the time, and to the prejudices existing against this branch. At the beginning of the seventeenth century, knowledge had advanced sufficiently to open the eyes of the public respecting the fallacy and absurdity of judiciary astrology and magic, a belief in which prevailed to a considerable extent in the preceding century; hence we find that the faculty of medicine opposed them with vigour. But there yet remained much to accomplish, for the purpose of enlightening the minds of the multitude to such a degree as to enable all to perceive the exact relation existing between different branches of inquiry. This was well exemplified by the single fact, that for a long time it was found impossible to persuade the generality of the people that there existed a vast difference between magic and chemistry, owing to the circumstance that by the latter, results that appeared to many extraordinary and even supernatural, were obtained. From this strange prejudice arose the prohibition made by all the tri-

* Dezeimeris.

bunals of Paris, of selecting chemical subjects as the theme of the dissertations of the graduates, and of delivering lectures, either public or private, on this science. This dislike to chemistry was much seconded by the esteem in which the Aristotelian philosophy continued to be held, as well as by the prejudices then prevailing against the principles of DESCARTES. Add to this, that the alchymists had greatly contributed to alienate the minds of many, perhaps involuntarily, against chemistry, by the obscurity in which they had affected to veil their art, and by the interested motives which almost invariably guided them in their public and private conduct.

With the progress of knowledge, however, such prejudices gradually disappeared, the prohibition against prosecuting the study and teaching of chemistry was withdrawn, and the faculty undertook its defence with zeal, neglecting no opportunity calculated to extend a knowledge of its principles and of its applications. It is strange that even at this period, the most violent opponents of chemistry, should have enumerated among their partisans, men of learning and talent, such as GUERCETAN, ANGELUS, SALA DELANNAY, and P PAULMIER. Such were the men the faculty thought it necessary to combat, being, as they were, more capable of producing an impression on the public mind, and of giving an unfavourable opinion of chemistry. The opposition of the faculty had not been directed to chemistry, and particularly to medical chemistry, but to the fatal application that was made of it during the whole of the sixteenth century, and a considerable portion of the seventeenth, by the alchymists, who imagining that every thing took place in the human body, exactly as they found them to occur in their crucibles, experimented accordingly, very much to the detriment of their patients. The medical faculty of Montpellier, situated as it was nearer than that of Paris to the Arabs of Spain, applied itself early to the study of medical chemistry, and contributed greatly to the diffusion, all over the kingdom, of a knowledge in this science. In that city there arose several chemists of great distinction, of whom we shall only mention VENEL and the two DES MALTES, because in their laboratories was trained LEMERY, who had before commenced the study of chemistry under GLAZER, at the garden of plants of Paris, and who having subsequently returned thither, taught that science with such success, that forty Scotchmen are said to have come all the way from their country to attend his lectures. Lémery published a work on antimony and an elementary treatise on chemistry, a universal pharmacopœia, and a dictionary of simple drugs, from which it will be easy to form an idea of the extent to which he contributed in clearing

chemistry of the obscurity in which it had heretofore remained enveloped. LOUIS LEMERY, the son of the preceding, studied chemistry under his father, became a member of the faculty, and was regarded at one time as one of the greatest chemists of the age. Towards the middle of the seventeenth century, chemistry began to form a part of the course of instruction afforded in the amphitheatre of the garden of plants by professors designated for that purpose by the faculty, and appointed by the king. In the performance of this honourable duty, ST. YON, GEOFFROY, LEMERY, BOURDELIN, and MACQUER succeeded to each other. These names indicate in a convincing manner the progress which chemistry had made in Paris. About the same time the faculty recommended strongly the study of this science and established annual courses of pharmacy, which were continued for a long time, and were numerously attended.* We need not continue this historical sketch of the progress of chemistry at Paris down to the period of the revolution, as the names and labours of LAVOISIER, GUYTON MORVEAU, BERTHOLLET, FOURCROY, CHAPTAL, &c. are sufficiently known and appreciated.

From the preceding account of the old medical school of Paris and the brief recapitulation we have offered of the individuals among its professors or alumni, who rendered themselves conspicuous in the various departments of the medical science, we are led to the conclusion, that the present school of that city need not be ashamed of its parent. Perhaps, indeed if we take into consideration the state of science, and compare the men who flourished at both periods, we might be tempted to think that the old school would, if it came once more upon the stage of the world, entertain a very different feeling towards her offspring, such at least as it was but a short time ago. But we must not anticipate here what we have to say on the subject of the present school. In the next number we shall complete our historical notice of this establishment, and offer a brief sketch of the plan of instruction adopted in it at the present time.

* See Hazon, Notice des hommes les plus célèbres de la faculté de médecine de Paris, p. 92, &c.

REVIEWS.

Art. XII. *A Treatise of Pathology and Therapeutics.* By John Esten Cooke, M. D. Professor of the Theory and Practice of Medicine in Transylvania University. In three volumes; Vols. I and II. (Volume III. unpublished.) 8vo. Lexington, 1828.

An extended treatise on pathology and therapeutics from the west of the Alleghany, is no ordinary occurrence, even in this book-making age, and we greet its appearance with kindly feelings and national pride. Kindred with that people, not less by consanguinity than by government and language, their rapid advancement is to us a subject both of exultation and astonishment. Their vast country, but yesterday a boundless wild, where the rude savage roamed, is now a cultivated domain, inhabited by a powerful people, possessing all the arts and elegancies of civilized life, and prepared to enter the field of scientific research, in honourable strife with her elder sister and the old world. May their career be as brilliant as their rise has been unexampled and auspicious, and no other feelings than those of common country, be permitted to mingle in our mutual intercourse. But let us not carry our home partialities too far. Science is of no country, and from whatever quarter it issues must be judged of on its own merits, apart from national feelings or foreign prejudices. This standard we shall endeavour to apply to the examination of the work before us, not regardless of that comity and respect which is due to the learning and distinguished station of its author, however his novel doctrines may be little accordant with our own experience and opinions.

The treatise opens with some judicious observations on the proper method of pursuing medical investigations, in order to arrive at just and permanent principles; and the author next expatiates on the causes which have retarded the progress of the science. The great cause of this evil he attributes to the extreme proneness of physicians to frame hypothetical theories from partial and limited premises, instead of tracing up the varied phenomena of disease through their chain of causes to the first or remote cause of the derangement, in the true spirit of the inductive philosophy. After such an explicit avowal of views which we have been taught to consider as the only sound procedure for the attainment of a correct system of pathology, aided,

however, by a knowledge of the laws of physiology and autopsic inspection, we did not expect to find the author straightway propounding a theory of his own, which, we fear, will be found to rest on no better data than he had the page before deprecated. This theory is no further novel than in the extensive application made of it to explain the production of the multiform characters of disease, but as it constitutes the key-stone of the system of pathology, which this treatise is devoted to verify and enforce, we shall give it in the author's own words, that the reader may be fairly put in possession of the aim and tendencies of the work under consideration.

"The first question which pressed on his mind, related to the cause of the derangement of the functions of the liver in the autumnal diseases. The symptoms observed were very commonly, by the mass of people and by many physicians, attributed to superabundance of bile, and this as well as many other popular notions, was derived from high authority in former days. The obvious relief afforded by a free discharge of bile, gave considerable countenance to the opinion; but the unanswerable objection was, that very often there is no bile discharged either from the stomach or the bowels, by the most active medicines, and the symptoms are more severe than in those cases in which there is an abundance of that fluid—and that a free secretion of bile is a most desirable object. It was evident then that the morbid symptoms are produced not by bile, but by the retained material of which bile is formed, viz. the blood in the liver. This led to the doctrine of congestion in that viscus being the cause of the disorder observed, a doctrine advanced by many late writers.

"It was very evident that this cause is capable of producing an increased secretion of bile, but the question arose, can it likewise produce a suppression of the secretion? From what occurs in the mamma after parturition, there is reason to believe it can. In that gland, a certain degree of congestion or accumulation of blood, produces increased secretion; a higher degree, such as produces hardness, suppresses secretion entirely.

"The next question was, how are the other parts, the stomach, the head, &c. affected? By sympathy, is the common answer; which, while it acknowledges an intimate connexion between these parts, conveys no precise idea of it, and contains no explanation of its nature.

"Revolving in his mind the nature of this connexion, the thought struck him that congestion, or accumulation of blood cannot exist in the liver, without extending into the vena cava, and its great branches, the jugulars, the emulgent veins, and the internal and external iliac veins; nor without producing an accumulation in all the veins leading into the liver, viz. in the veins of all the chylopoietic viscera. It was at once apparent that the same accumulation must affect the brain, and the stomach and bowels; and derange the functions of the latter, at the same time that it deranges those of the liver. Further reflection led to the observation, that the same accumulation affects the kidneys and the uterus also.

"Considerable time was spent in tracing out the effects of this accumulation of blood in the vena cava and its branches, in the several parts in which they are situated.

"It was found that this cause is capable of producing pain in the head, vertigo, stupor, &c.; enlargement of the liver and pain in that part, increased secretion of bile, with nausea, vomiting and purging; or suppressed secretion and constipation; and in the glands of the stomach, increased secretion with ravenous appetite, or suppressed secretion and consequent want of appetite, flatulence and acidity; together with derangement of other parts not necessary to particularize.

"An accumulation of blood in the interior veins was thus found to be capable of producing the symptoms preceding and accompanying fever: it still remained to account for the increased action of the heart and arteries. Blood being the natural stimulus of the heart, it is evident that a sudden increase of the quantity poured into it, must produce increased action of that organ, if it be at the time capable of it. The sudden accumulation therefore which takes place in the cold stage of fever produces the increased action that follows; while the above-mentioned affections of the head, stomach, liver, &c. which precede fever, are the effects of gradual accumulation of that fluid in the vena cava, &c.

"The next question was, what is the cause of this accumulation? It had been observed that weakened action of the heart is always present in the commencement of these autumnal diseases, and that it is produced by all the remote causes of fever; and it was evident that it must, whenever present, necessarily produce accumulation of blood in the vena cava, &c.; and therefore that this is the cause."

The facts and arguments on which this theory rest for support, will be examined as they occur in course. For the present, we shall content ourselves with remarking, that it is much too mechanical for general reception in this age of physiological and vital pathology; and, moreover that it is no where shown that the liver is actually in a state of congestion, or that the vena cava and its branches seriously suffer from an accumulation of blood in the precursory stage of fevers, though it must be admitted that such accumulation to a certain extent constantly takes place during the continuance of rigors, from whatever cause induced; consequently, we are constrained to class this theory, according to the author's own definition, among those hypotheses which have been so long the bane of medicine.

After passing in review some of the more prominent doctrines, from Hippocrates to the time of Rush, which have exercised a controlling influence over the science, and pointed out what he conceives to be their radical defects, especially their neglect to trace the symptoms of disease through their train of causes up to their remote cause, he proceeds to the consideration of the several remote causes of fever. These he endeavours to prove are all either directly or indirectly debilitating. On this point we would remark, that whatever may be the mode of operation of these causes, it cannot be denied that fever does not take place until a general or local irritation is set

up, which is, indeed, itself a state of fever, whenever the irritation is sufficiently intense to affect the rest of the system. Besides, the view taken of the operation of the remote causes, necessarily supposes fevers to be idiopathic and general affections, a doctrine fast vanishing from the minds of physicians, and which the researches of Broussais, Louis, Andral, and others, particularly the pathological anatomists, render more than problematical. We cannot at this time enter upon the discussion of this interesting and important question, for it would lead us too far away from the subject in hand, and must therefore refer the reader, for a triumphant refutation of the ancient errors on this subject, to Broussais's *Examination* and the *Pyretology* of Boisseau, of which latter work a full analysis was given in the last number of this Journal. We will merely observe in passing, that if it can be shown, as we believe it can be, that the fevers heretofore esteemed idiopathic arise from local irritations, and are nearly allied with phlegmasial affections, that then whatever may be the nature of the remote causes inducing them, that these causes must be either directly or indirectly essentially stimulating in their operation, a conclusion in contravention of the author's theory. Let us, however, examine a little in detail his explanation of the mode of action of some of the more frequent of these causes, in order that we may be enabled to judge how far he has been successful in fortifying his assumed premises.

The first remote cause of fevers noticed, is prolonged abstinence from food, and insufficient nourishment. Now we are free to admit that the first effect of this cause is not only weakened action of the heart, but of all the powers and functions of the system. This state of depression, however, is not a state of fever; on the contrary, it is universally considered one of our most efficient means to remove or alleviate an existing febrile affection. When abstinence is carried to the extent of producing disease, it does so not by weakening the action of the heart, which effect rather wards off for a time the evil, but by changing the character and qualities of the circulatory fluids, and rendering them so acrid and irritating as to produce not only most intense inflammation of the stomach and intestines, but also of other tissues of the system, which, when they prove fatal, destroy life amidst unexampled pain and suffering, as was evinced in the case of the criminal in France, who some years ago destroyed himself by voluntary starvation, and whose case was detailed with great minuteness in the French journals at the time. M. Gaspard, in Magendie's Journal, Vol. I. p. 237, relates the effects of a most desolating famine which occurred in a part of France, in 1817, where the inhabitants

were constrained to divide with the cattle the herbage of the fields, and to satisfy the cravings of hunger with all sorts of vegetable productions that fell into their way. The effects that ensued from this insufficient and gross nutriment were general serous diathesis with hydropic affections, without organic lesions of the chylopoietic viscera, and a remarkable exemption from fevers and febrile affections. These observations, with others of a similar character, that might be quoted, convince us that systematic writers have servilely copied from one another, without examining into its accuracy, that famine and moral causes are the frequent remote causes of fevers. We do not deny that they are sometimes predisposing and perhaps even adjuvant causes, not only of fevers, but of many other diseases, by depressing the vital powers of the system, and thus rendering it more susceptible to morbid derangement; but we think it would puzzle our author to adduce an instance where either of these causes has unaided produced what he would call an idiopathic fever.

The next remote cause mentioned is excessive bodily exertion. Undoubtedly this is often followed by great languor and debility, especially when its effects terminate without further ill consequence, but when fever supervenes from this cause alone, it is usually during the state of excitement and tumultuous hurry of the circulation induced by the over-exertion of the muscular powers. The same remark applies to stimulant drinks as a cause of fevers. We are astonished that every physician's personal experience does not afford him the proof of this position. The constant attendant on taking an undue quantity of stimulating drink, is in fact a state of febrile excitement, which commonly ceases with the dissipation of its cause, and yet it will be hardly contended that that excitement has been preceded by weakened action of the heart.

In making contusions from external violence, as falls and blows, the cause of fevers, the author has drawn his argument from the analogy of their first effects to concussions of the brain from the same causes. Here the same objection nearly recurs that was made when speaking of the effects of starvation. As long as the nerves of the part suffer from the benumbing or paralyzing effects of the external violence, there is no fever induced: when the injured part becomes the seat of irritation and fluxion, then fever is lighted up by this irritation, and not because the nervous system has been temporarily interrupted in its functions. In those cases where the brain is the suffering organ, inasmuch as its functions cannot be long suspended without fatal consequences, we are obliged to rouse the vital actions by the use of stimulants, although we are sensible that the after

effects of the injury will call for the most active depletory measures, and this too in cases where no concussion has been produced.

Cold is one of the most constant and evident causes of disease, and the author endeavours to prove, chiefly from the facts furnished by Currie, that it invariably does so by weakening the action of the heart. This position is tenable to a limited extent only. Many facts and other authorities can be adduced to show that its modus operandi is far from being so simple as is here supposed. We have always considered the observations of the late Dr. Currie on the action of this power, as rather popular than profound. His work, indeed, is eminently practical, and in that way has been of great service in pointing out to physicians under what circumstances cold may be resorted to with safety for the reduction of febrile excitement; but other authors have treated of the operations of this agent on the system in a more philosophical manner. The work of M. Beaupre on this subject is one of the ablest and most satisfactory that we have met with. His experience, and his opportunities for observation of its effects, which were very extensive, led him to assign to the operation of cold, effects differing greatly, according to the circumstances under which it was applied, its degree of intensity, and the condition of the system at the time. Sometimes, he says, it is refrigerant, sometimes a tonic, in other instances an astringent, then again a sedative like opium, or a pure debilitant; whilst under ordinary circumstances it diminishes sensibility and increases contractility. Its *impression*, an effect overlooked by physicians, he considers to be decidedly stimulant to the living fibre. Dr. Cooke differs entirely from such views. He rejects even the modifying effects of other concurrent causes contended for by Currie, and pronounces its operation to be always directly debilitating, weakening the action of the heart and arteries, and to be indirectly stimulant only by being applied in that degree which is followed by reäction of the circulatory system. The most important circumstance attending the application of cold to the cutaneous surface, is, in our opinion, its revellent effects on the internal organs. In this way it seems to us to produce ordinarily febrile affections, a mode of operation wholly overlooked by our author, and not duly estimated by Beaupré, or any writer with whom we are acquainted.

We think we have said enough to show that the author has not succeeded, to use his own language, "in tracing the remote causes through their chain of effects to the symptoms of disease," by assuming weakened action of the heart, from the nature of these causes, to be an indispensable precursor of all fevers, and we shall not, there-

fore, examine into the operation of the remaining causes with reference to this subject. A more untenable theory, or one leading to more erroneous principles of treatment, we have not of late met with; but the time has gone by when such views can exert much influence over the minds of practical physicians, and we may safely turn it over to the fostering care of the author and his disciples:—

——Velut inter ignes
Luna minores.

The three succeeding chapters on the remote causes of the epidemics of hot climates are very interesting, and may be consulted with advantage by all who are seeking information on this department of the science. The principal circumstances which have attended the production of these fevers, especially in this country, are detailed with great clearness, and fully establish the doctrine that all these fevers are produced by exhalations from vegetable substances undergoing the putrefactive process, from the joint operation of a due degree of heat and moisture. The doctrines of Dr. FERGUSON, that malarious exhalations are independent of vegetable putrefaction, and that in fact a paucity of water is one of the conditions of their formation, is ably confuted, chiefly from the doctor's own facts.

The author, in his eagerness to exclude animal matter from any agency in the production of these epidemics, has, we think, passed over too lightly the proofs of the power of exhalations from putrid animal matter to produce febrile diseases. Numerous instances of their agency in this respect are not wanting in the annals of medicine,* and we ought not to reject them because they do not square with our own theoretical preconceptions, but rather endeavour to ascertain their diversity of effects, and in what the infecting material of each consists. This leads us to the author's next chapter, where he attempts to show that malaria is nothing more than carbonic acid gas. This opinion mainly rests on the assumption that like carbonic acid gas, it is a dense (heavy) air, and has the property of changing the blood when respired to a blackish hue; for the other arguments adduced, as its ready absorption by water and lime, its consumption in vegetation and generation by combustion, &c. are altogether gratuitous positions that need not detain us. As for the argument drawn from the similarity of effects of breathing an air highly charged with carbonic acid gas, and the malarious fevers, the analogy is much too loose and unimportant to be of any force. This consideration of the subject, indeed, rather makes against the theory, and if the agents

* See an elaborate paper on this subject in the preceding volume of this Journal.

shall hereafter be proved to be the same in both instances, we must attribute the diversity of results to some peculiarity of attendant circumstances, which we are not enabled at present to appreciate. It by no means necessarily follows that malaria is a heavy gas, because it is more deleterious near the source of its origin than when wafted into the general atmosphere; for this may be owing to the very concentrated state in which it exists before it is diffused abroad, and so greatly diluted, as to become comparatively innoxious. The second argument has more weight with us, without being entirely conclusive. We are gratified to find the experience of Dr. Cooke corroborating the observations of Dr. STEVENS, of Santa Cruz, *(See Vol. VII. p. 505, of this Journal,)* that the blood in these fevers is changed to a dark venous or black colour, although the experiments of Dr. MITCHELL, (*See his paper on the penetration of fluids in this Journal, Vol. VII. p.* 36,) render it highly probable that this change may be owing merely to a deficiency of oxygenous gas in the air inspired; still the remarks of our author on this subject, for which he could not be indebted to Dr. Stevens, are highly important, and may ultimately lead to a knowledge of the nature of these fevers, and of the malarious exhalations producing them. In the mean time, we must consider this branch of the inquiry to be *sub judice*, and withhold our assent from any theory that is not supported by more conclusive evidence than we have yet met with on this subject. The morbific cause may be carbonic acid gas, it may be carburetted hydrogen, sulphuretted hydrogen, or arise merely from a paucity of oxygen gas in the air respired, or finally from a subtle material that has heretofore eluded the investigations of both physician and chemist.

The chapter on the origin of winter epidemics is one of the most important and original in the work. These epidemics, which are usually a combination of bilious fevers with pneumonic disease, are considered to arise from the joint operation of miasmata and cold, and to be in fact a continuation of the autumnal epidemic modified by change of season. This connection has been casually noticed before by writers, but without being applied to elucidate the cause and character of those malignant complications, so often exhibited in winter epidemics, and our author has rendered a service to medicine by bringing the subject more explicitly under consideration. We do not entirely coïncide with him in the way in which the effect is brought about. We cannot conceive how the miasmata of October can operate conjointly with the cold of February as simultaneous causes. But perhaps we do not comprehend him, and he intends to say that the autumnal cause has produced a morbid condition of the system, which is aggravated into disease by the cold and wet of

winter: if so, we can see no reasonable objection to this view of the matter, except that it is insufficient to account for the occurrence of *all* winter epidemics which are characterized by bilious or gastric symptoms. We believe the winter constitution to be sometimes such as to give rise to these complications without the aid of previous derangement.

The identity of the autumnal epidemic diseases is next insisted upon, but as this subject has been ably and learnedly treated by Rush and other writers to our entire satisfaction, and as no new argument or illustration of force is adduced in corroboration of their views, we shall not repeat what is already familiar to our readers. We will remark, however, in passing, that we were somewhat surprised to find their identity urged on the ground that they were all preceded by weakened action of the heart; independent even of the evident absurdity that would flow from the admission of such a principle, yet one of the main objects of the work seems to be to prove that *all* fevers possess this attribute. Lest we should be thought to misrepresent the author on this head, we will let him speak for himself.

"We infer the same from the identity, in all these fevers, of this new cause, weakened action of the heart, produced by the same remote cause. If we infer identity of the ultimate effects from the identity of the remote cause, and the justice of the inference is confirmed by observing that it is so far correct, we more confidently infer their identity from the identity of a cause nearer than the remote cause.

"It may perhaps be objected to this inference, that weakened action of the heart precedes variolous fever also, and therefore the identity of the autumnal fevers cannot be inferred from their being all preceded by this state of the system. It is replied, that weakened action of the heart uniformly produces certain effects called fever. Even when this cause is produced by a peculiar remote cause, the variolous virus, it produces its proper effect, fever, modified by certain effects peculiar to the remote cause. As weakened action of the heart, produced by *this* remote cause, uniformly produces corresponding effects; a fever sui generis; so, when produced by another remote cause, miasmata, we infer it will as uniformly produce a corresponding disease. Thus, as the confluent and distinct small-pox, proceeding from one remote cause, the mildest following inoculation with virus procured from a case the most malignant, are one disease; so, fevers, the mildest and most malignant, proceeding from one remote cause, miasmata, are also one."

The remaining part of the first volume is occupied in treating of contagion as a remote cause of yellow fever, plague and typhus, of the origin of plague and of typhus, and of the identity of these diseases with malarious fevers. This part of the work contains little particularly worthy of remark. The same facts and arguments are reiterated, which have been many times before repeated, to show that none of these diseases are propagated by contagion, and that they are

all merely different grades of the same disease, arising from miasmatic exhalations, modified by attendant circumstances. We must enter our caveat against such sweeping conclusions. Ultraism in medicine is as pernicious as in politics, and has injured the best of causes. No American physician knows enough of plague to be able to lay down, with that certainty which science demands, the laws which controul its origin and propagation. On this subject, he must be content to receive his knowledge from the report of others; and every practical physician, we should think, must at times have had his doubts about the contagious character of typhus. At any rate, the exhalations which produce this latter disease are generated under very peculiar circumstances, and are not to be confounded with marsh miasmata, any more than the time of its prevalence is to be identified with the ordinary occurrences of malignant bilious fevers. Had the distinction pointed out and inculcated by MILLER, (*See the appendix to his edition of Thomas's Practice,*) been attended to, much of the difficulty which pervades this subject would have been explained away, without resorting to the doctrine of the unity of fevers: a doctrine which we could wish, for the reputation of Rush, had never received the sanction of his great name; and which here, as on all occasions, proves either too much or nothing. The author moreover elsewhere admits, as indeed every physician must, that fevers arise from a diversity of causes. As for the autumnal epidemics of our country, the proofs of their miasmatic origin, and non-contagious character, are ample even to the risk of overlaying the subject; but epidemic typhus, and no fever that is not epidemic is strictly entitled to the appellation, has heretofore been so extremely rare in this country, and some of the circumstances of its propagation are so obscure and puzzling, that we cannot consider the question of its communicability as definitely settled. On the whole, therefore, we hold it to be the wiser course to lay down as positive only what our own experience, aided by that of others, warrants, and to leave to future investigators, more fortunately placed than ourselves, the task of elucidating such other points as fall within their actual observation. CUVIER has somewhere observed that the human mind supports doubts with difficulty, but it is precisely on that account that the learning to bear with them ought to be one of the principal studies of men of true learning. Had our author been impressed with this sentiment, he would have abated much of the confident air with which he advances and maintains his theoretical doctrines on this point, and his readers been spared much that we have passed over in silence.

The second volume opens with an exposition of the effects of

weakened action of the heart, which is considered, as we have seen, the immediate and invariable consequence of the operation of all the remote causes of febrile affections, and indeed of nearly all the diseases incident to the human frame. This weakened action of the heart, aided in some degree by the check given to all the secretions and excretions, is believed to produce an undue accumulation of blood in the venous cavity, (a term employed to denote the vena cava and its abdominal, thoracic, and cerebral branches, which are destitute of valvular apparatus;) and the different symptoms that occur in the course of diseases from this cause, is traced to this venous congestion. Anatomical considerations are urged in proof of the great liability of the venous cavity to become congested with blood from diminished force of the heart's action. This consequence is attributed in a great measure to these veins being destitute of valves to aid in propelling the blood and to prevent its regurgitation, whilst the external veins are guarded against such accidents, by being furnished with them throughout their extent, to accomplish these purposes. Writers, it is true, generally assign this double function to the venous valves, but we were never able to conceive how they could act otherwise than as passive agents, to prevent the reflux of blood from extraneous causes. Hence, those parts only are provided with them, where such causes can operate, as in the extremities, and they are wholly wanting in the external parts of the head, where no liability to such causes exists, and in the tri-splanchnic cavities, except the heart, muscles of respiration, &c. Could internal venous congestions take place as easily as the author supposes, the human system would scarcely ever be without them. Even continued bodily exertion, a little severe, as it usually excites greater action proportionably in the voluntary muscles than in the heart, must constantly tend to push on the blood into the internal cavities, and thus give rise to undue accumulations in them, were such a cause susceptible of doing it, and was not counteracted by a law presently to be noticed. A reference to the experiments of Barry and Magendie, on the powers of the circulation, might also be adduced, to show that weakened action of the heart alone is incompetent to produce the effect here assigned to it; but we believe the position to be abundantly refuted by the ordinary occurrences of disease. Still it cannot be denied, that in all irritations of internal organs, there is from the very commencement of the derangement, an undue accumulation of blood in the affected organs, attended, in irritations of a certain degree of intensity and importance, with a marked deficiency of that fluid in other parts; this, however, does not arise from the me-

chanical cause supposed, but from a vital law of the economy announced by Hippocrates, in the memorable words, *ubi stimulus, ibi fluxus.* The recognition of this law enables us to explain why it is that the blood deserts the external surface in morbid derangements of internal parts, without having recourse to weakened power of the heart's action, or even to the suppression of the secretions and excretions. The effect of this latter cause to produce congestion, must at best be to a very limited extent; for if, during the first or atonic stage of fevers, there is little waste or evacuation of fluids, there is also little ingesta of any sort taken. Thirst comes on only on the accession of the hot stage, when there is more indication of arterial than of venous congestion.

Having thus pointed out the manner in which he believes this venous congestion to be brought about, the author proceeds to enumerate the different symptoms that are its immediate consequence, mainly relying on the attendant circumstances of feeble pulse, and paleness and shrinking of the external parts, as indicative of this condition. The principal symptoms detailed, as arising from congestion of the venous cavity, are pulsation in epigastrio; palpitations; tumour, pain, heat, and increased sensibility in the abdominal region; oppressed, disordered respiration; head-ache, delirium, convulsions, and coma; serous effusions; hemorrhages; diminished and increased secretions and excretions; rigors, anorexia, nausea, and indeed all the symptoms that usher in a febrile paroxysm, as well as many of those which constitute its stage of excitement. A single remark will suffice to meet this part of our author's theory, and which we are convinced, every physician the least acquainted with disease at the bed-side, will coïncide with us in holding as incontrovertible. It is this. Nearly all these symptoms are commonly attended with a perturbed condition, and undue action of the heart and arteries, and that mere venous accumulation is not sufficient to account for any of them, under all the circumstances in which they are known to occur. Moreover, if the case were otherwise, and feeble pulse and pale skin were admitted to be the usual concomitants of these symptoms, it is begging the question to assume them, as indications of venous congestion, until the congestion was first shown to exist, and to be capable of producing such effects. What proofs does pathological anatomy afford of this venous congestion in febrile affections? Absolutely none whatever. A reference to the works of Louis and Andral, the ablest and best authorities on a question of this sort, will show that other and more permanent alterations of structure, occur in the great majority of cases, to account for the

febrile phenomena. But post mortem examinations are not allowed to disturb our author's reflections in pursuing a favourite object, or he would not consider pain, soreness, and heat of the abdomen, to arise from accumulation of venous blood, because they are attended with feeble pulse, and pale and cold skin. He assuredly cannot be ignorant that cases of peritonitis of the most intense grades of violence, every now and then occur, in which the pulse is rendered extremely small and feeble, scarcely to be felt, the skin cold and clammy, the external parts shrunken and bloodless, and all the vital energies of the system seeming to be concentrated in the abdominal region, without being able to excite those sympathetic symptoms which less severe inflammations exhibit. Should a practitioner under such circumstances, judging as our author did in a similar case, (see paragraph 1539,) that the symptoms arose from an accumulation of venous blood in the abdomen, give stimulant remedies, to rouse up the heart's action, the most disastrous consequences might ensue, and lead to a fatal termination of the disease. Nor is this the only instance in which inflammation may be mistaken for congestion. Nearly all diseases are made to consist in accumulation of venous blood, causing obstruction to the blood's circulation. External inflammations, derangements of the nervous system, and the morbid condition of the digestive functions, &c. are considered as depending on the same state, thus overlooking, in a great measure, irritation of the living fibre, the active agent of disease, in favour of a mechanical and passive cause.

As most diseases are considered to be the consequence of accumulation of blood in the venous cavity, from the operation of remote causes weakening the action of the heart, they are divided in conformity with these views and comprehended under the following heads. 1st. Diseases attended with increased action of the heart without local affection, as simple fevers. 2d. Diseases without either increased action of the heart, or local affection, as dyspepsia. 3d. Diseases with increased action of the heart and local affection, as pleurisy. 4th. Diseases without increased action of the heart and with local affection, as the consequences of a bruise, or fall, without an attendant fever. We do not see any practical advantage to be derived from this arrangement, which must besides vary in its application with the theoretical views of each that shall adopt it, and for ourselves, we confess that we are unable to form any precise idea of a catalogue of diseases arranged in conformity with it. We shall therefore pass on to the consideration of the therapeutical department of the work.

Therapeutics.—The principles of treatment for all diseases arising from an accumulation of blood in the venous cavity, are comprised in four general indications. 1st. To remove the remote causes operating on the heart. 2d. To excite the weakened action of the heart and support its action. 3d. To reduce the quantity of blood accumulated in the venous cavity. And 4th. To reduce the action of the heart in the stage of excitement. The mode of attaining the first is pointed out by the nature of the remote causes; the second may be accomplished in febrile affections, by warm drinks, warm applications externally, and the exhibition of emetics to throw the blood on the surface, and in intermittents, during the apyrexial period, by giving permanent stimulants and tonics. The author, however, prefers in these latter diseases, as well as in chronic affections, the repeated use of cathartic medicines, as calomel, aloes, rhubarb, jalap, scammony, &c. given during the time of the lowest stage of weakened action, in order to keep up and stimulate the heart's action, and to produce their evacuant effects in the after stage of excitement. The cold bath may be resorted to with the same intention; the reäction induced being often sufficient to enable the heart to throw off its accumulated load. The third indication may be fulfilled by the subtraction of blood, but here also the chief dependance is placed on the free and daily use of the cathartic medicines above enumerated, given for their chylagogue effects, so as to produce full, consistent, dark-coloured or bilious discharges, and repeated to the entire removal of the diseases. The fourth indication is met by bleeding, purging, and cold applications. Little reliance is placed on promoting discharges from any other organs than the chylopoietics, and nauseating medicines are rejected, although admitted to be of considerable efficacy, because they are disagreeable in their operation. Such are the therapeutical principles, and if the pathological views are, as we have deemed them, hypothetical, the consequences of these practical precepts will be found we fear, to be something more than imaginary. This constant resort to reiterated purgation, not to be restrained even after it has *induced bloody discharges*, cannot be otherwise than disastrous; sometimes immediately so, by aggravating the already irritated state of the primæ viæ; and in other instances, laying the foundation of future ailments, by the production of chronic derangements. This purging is quite a passion with our author, and employed in nearly all occasions, and to answer opposite and contrary indications. To check menstruation when too profuse and to bring it on when suppressed or scanty. He never fears any untoward effects from the most active and stimulating materials

of this class of remedies, but gives them with the same confidence in uterine hæmorrhages in the latter months of pregnancy, and in hæmorrhages of the intestinal canal, as others would employ them to relieve an impacted state of the bowels. It would seem that in his view hardly any other medicinal effect is capable of removing disease. Has the exhibition of cinchona or the nitrate of silver cured a case of dyspepsia, it was by acting as a purgative. Has tansy or lime water warded off the gout, or calomel and squills removed a dropsy, it was still by their purgative qualities without reference to their operation on the other emunctories of the system.

It is unnecessary to enter into details on the pathology and treatment of individual diseases. They are of course in conformity with the general principles: accumulation of blood in the venous cavity, the all-sufficient cause, and for treatment, blood-letting to relieve this accumulation, when the strength and fullness of the pulse will warrant its employment; but in general the great reliance is on purgation, repeated again and again without looking to any ill consequences that such a persevering course may induce. The infatuation with which the use of pills of aloes, jalap and calomel, is persisted in day after day, till the patient has taken in a case of dyspepsia, not grains, but ounces, and we might almost say, pounds, is really incredible and consternating.*

Well may the author observe that his treatment is, as far as he knows, new! HAMILTON, and every writer with whom we are acquainted, are mere slop doctors, compared to him. Even the famous LEROY, of purging memory, (*see his Médecin curatif,*) must quail before him, and wonder how the stomach and intestines of our western brethren can withstand such rough treatment. The extent to which this preference for purgatives is carried may be judged of by the fact, that the repeated use of cathartics is preferred to quinine in the treatment of intermittents, and their daily use persevered in, in continued fevers, in despite of intestinal hæmorrhages, to the entire extinction of the disease.

However the late writers on fevers may differ concerning their seat and local character, all who have made pathological anatomy the basis of their investigations, and the opinion of none others deserve weight in settling these questions, accord to the digestive tube an important agency in the production of the febrile phenomena, or a

* In our periscope, under the head of American Intelligence, we have inserted two cases of dyspepsia related by our author. They afford a specimen of his purgative practice in that disease.

morbid condition of some part of it, which has supervened during the course of the disease. We must be regardless of these conclusions, not to be invalidated by hypothetical reasonings, as well as the happy effects which we have witnessed from the adoption of such views in the treatment of fevers, before we can be brought to consider the combined application of such stimulants as calomel, aloes and jalap. to an already irritated part, can be void of danger, and to be preferred to a soothing ab-irritant plan of treatment. The influence which pathological anatomy now happily exercises over the minds of physicians will not permit them to retrograde to the ancient routine of stimulant treatment, and we do not apprehend that such practical precepts as are inculcated by our author can long stand their ground, even within the sphere of his influence against the advancing triumphants of actual science.

We have given enough of the contents of these volumes to enable our readers to estimate their general character and value. The same zeal and undoubting confidence in advancing novel doctrines pervades every part of them. All is plain to our author, even the obscurest questions in physiology. The arteries are made to terminate directly into veins, in some instances with sensible motion. The glands are nothing more than continuations of arteries into veins, giving rise to excretory capillaries exactly at their point of junction. What has been taken for fibrous structure of the brain is simply medullary tubes for the conveyance of the excretory nervous fluid into the nerves, which are equally of tubular structure. He may rest assured that such doctrines are not now to be received on the *ipse dixit* of any one. They must be tested by long and patient investigation and comparison with all the known phenomena of vital action before they can merit to be thought more than mere conjectures. The science of medicine has within these last twenty years undergone great and salutary changes. Hypothetical reasonings have given place to facts rigidly deduced from experiment and observation; but this change seems not to have affected in any degree, the work before us, which is essentially a production of the last century; with the same proneness to theorize, and to rest, for the support of particular views, on the authority of great names, which characterise the productions of those times. This similarity is not, we suspect, accidental. At any rate we have no where the least intimation that the author is acquainted with the labours of Parry, Armstrong, and Abercrombie, of Britain, or of those of Louis, Andral and Laennec, of France, with a host of others, who have

contributed to base medical science on principles unknown to former times.

In closing our observations we must be permitted to remark, that we have never performed our critical labours with greater reluctance than on the present occasion. We have found so much to dissent from and to censure, that we have sometimes feared that it might be thought that we were rather impelled by personal pique than a proper regard for the interests of science; and yet the author is personally unknown to us, and we have only been led, if we know ourselves, to deal thus freely with his opinions, because we apprehend that his talents, his learning, and the eminent station which he occupies were calculated to disseminate his unsound doctrines over a widely extended country. When we next hear from him, we hope to have more to commend, and an opportunity of aiding him to propagate sound and rational views of a science so nearly allied with the best interests of society. C. D.

Art. XIII. *The Pharmacopœia of the United States of America.* By authority of the National Medical Convention, held at Washington, A. D. 1830. Philadelphia, John Grigg, 1831.

The Pharmacopœia of the United States of America. By authority of the General Convention for the formation of the American Pharmacopœia, held in 1830. New York, S. Converse, 1830.

If the medical and scientific world were restricted to the most simple modes of expression and inter-communication, if we possessed, for example, but one nosology, but one system of natural history, but one language of chemistry and pharmacy, it is obvious that the books which treat of those sciences, would be greatly simplified; that the labour of learners would be abridged, and much confusion prevented among those who respectively teach, or cultivate, these departments of knowledge. Of this fact, the public are so well aware, that attempts have been many times made to establish in these sciences, standards of definite expression. Sometimes under the sanction of governments, sometimes from the influence of popular writers or teachers in science, and sometimes from the conventional authority of delegated bodies, a common language has been introduced, and obtained a degree of currency, which though seldom universal, has, nevertheless, been sufficiently extensive to produce a full proof and conviction of its utility.

Unhappily, however, in those studies, the subjects of which are most multifarious and complex, and which therefore stand most in need of precision in their nomenclatures, an inexplicable confusion of language still exists. Mineralogy, zoology and botany, particularly the two latter, in themselves no trifling subjects of labour, have been rendered to most persons, absolutely insurmountable, by the cumbrous load of synonyms, which has been gradually accumulating upon them, under the agency of successive reformers. The Latin language, once the common medium of intercourse for the learned of all countries, has itself become a sort of Babel, furnishing not unfrequently, a dozen incongruous names for the same object. And since neither Napoleon nor Nicholas, nor any general congress for the pacification of Europe, has taken in hand the reconciliation of conflicting terminologies, the republic of names still remains at the mercy of every innovator whose new colours may attract partisans and disciples, and increase the anarchy already existing.

It is therefore sufficiently evident, that the sciences which we have mentioned, need retrenchment, quite as much as extension; and were it not for the fact, that certain nomenclatures have become incorporated with books more useful than themselves, it would be a happy circumstance, if all of them, save one, could be consigned to oblivion. To determine what one in each particular case, should supersede all the rest, might be as delicate an affair as to elect a president of the United States. But it is, not the less true, that one. even though deficient and unacceptable, would be far better than many.

Pharmacology, considered not only as a science, but as a medium of communication for two extensive professions; particularly needs simplicity and precision of language. It likewise requires that its expressions should be generally intelligible, an advantage which cannot be secured, except by the introduction of a general standard, regulating the names, as well as the selection and modification of its subjects. On this ground, it is presumed, there is no variance of opinion. But when we arrive at the question, what the standard shall be, and who shall appoint it, the charm of unanimity is very apt to dissolve.

It is not difficult to frame a competent pharmacopœia, which shall be abundantly adequate to the wants of the medical community. But to devise a plan by which its general adoption shall be secured, is a task which experience has proved to be attended with no ordinary difficulty. Local partialities, and an unwillingness to receive the supposed dictation of others, have, in more cases than one, frustrated the best contrived plans for promoting a general accommoda-

tion. And since indisputable perfection is not to be expected in a pharmacopœia, there will always be found a spirit of hypercriticism, ready to consider trivial defects, as reasons for rejecting a public good.

We hold it to be a maxim, that one standard of pharmacy, if sanctioned throughout a whole country, even though it be an imperfect one, is far more promotive of public convenience than a number of more learned and perfect ones, existing simultaneously. The late autocrat, Alexander, ordered his Scotch body-surgeon, Sir JAMES WYLIE, to prepare a Pharmacopœia Rossica, which he introduced by an ukase throughout his extensive dominions. This work, a copy of which has reached us, appears to be sufficiently respectable. But, without entering into its particular merits or demerits, we will venture to presume that the subjects of his hyperborean majesty have been enabled to compound and swallow their drugs with equal effect, and far less trouble, than those of the king of Great Britain, speaking in the tongues of three different colleges.

If the business of making a pharmacopœia could be commenced *de nova*, without reference to any of the standards now existing, the great question presented in regard to nomenclature would be, whether names should be scientific, that is, in some measure descriptive of the origin, character, and composition of medicines; or whether they should be arbitrary, having no such reference or import. In the former case, the names would be more expressive, and better suited to the dignity of science; in the latter they would be more permanent, from not being connected with any fluctuating medium.

To illustrate these positions, let us observe the revolutions through which a single substance has been obliged to pass, in order to keep pace with the progress and improvements of science. Since the discovery of calomel, that article has been reformed by at least a score of successive appellations. In the figurative language of alchemy, it was known by the names of draco mitigatus, aquila alba, manna metallorum, &c. As chemistry grew somewhat more definite as a science, this substance became mercurius dulcis, and mercurius dulcis sublimatus. Under the regime of LAVOISIER and his cotemporaries, it was a muriate and a submuriate; and after DAVY and GAY LUSSAC, became a chloride and a proto-chloruret. Lastly, as if the *gentleness* of its character was to produce a reconciliation of extremes, the *mitigated* dragon of antiquity has become a *mild* chloride of mercury.

On the other hand, when a nomenclature has been perfectly arbitrary and divested of scientific relations, it has been proportionably durable and constant. Like the words engrafted on a national lan-

guage, its origin may be vague and accidental, yet the public convenience prevents it from falling into disuse; and though it might, perhaps, be susceptible of reform, yet the benefit would not compensate the trouble. In regard to pharmacology, there is one language alone which has remained permanent amidst mutations, and which a hundred years have not been able to shake from its basis—we mean the language of commerce. This language, which is for the most part arbitrary and accidental, has seen many pharmacopœias rise and fall, and is now quite as likely as any one of them to last for a century to come. The simple names of opium and alum, of calomel and camphor, have never yielded to any periphrastic method of expressing the same things. Corrosive sublimate refuses to be modernized, and the salts of Epsom and Rochelle maintain their ground against all chemical interference. The combined learning of two hemispheres is unable to prevail against copperas and cream of tartar, and the manufacturer and merchant still continue to make, sell, and buy their tartar emetic without troubling themselves to inquire whether it is a "tartrate" or a "cream-tartrate," or neither. Nay, in some instances the vulgar appellations have turned the tables upon the classical and scientific, and the homely name of potash has dictated to the learned their more elegant potass and potassium.

To combine in practice the expressiveness and precision of one language with the durability of the other, though very desirable, would, from the nature of the subject, be impossible. Yet an approach may be made to the advantages of both, by adopting in the first instance a descriptive language founded on the existing state of science at the time, and afterwards to declare it perpetual, or at least to establish it in force during a long term of years. We should thus possess a medium of communication in itself entitled to respect, and rendered more valuable by the prospect of being permanent.

It appears to us, that the stability of pharmaceutical language is a consideration of quite as much importance as its improvement. Great changes, in regard to any prevalent system, can seldom be effected without doing violence to established habits and preferences of the community. An apothecary whose drawers are labelled with the legitimate nomenclature of the day, and a physician who for a score of years has employed a uniform phraseology in his prescriptions, are not compensated by any trifling advantage, for the risk and trouble of an entire change. Wherever, therefore, it appears that a uniform system is extensively established in any country, it is incumbent on the friends of science to oppose all unnecessary deviation from the rules it prescribes. If the general progress of other sciences has been such

as to require that pharmacy should be made to keep pace with them, its improvement ought to consist as far as possible in additions, synonyms, and commentaries; but not in great or violent changes. It is fortunate for the science of anatomy that its distinctive names have been handed down from one generation to another with so little alteration; and we believe no reformer at the present day would obtain many proselytes, who should propose to abolish its nomenclature, because os sacrum, ossa innominata, and similar names, are absurd, misplaced, or unscientific.

In regard to preparations and compositions, it may often happen that improvements are necessary in pharmacy, to promote the economy and uniformity of certain results. Such changes are highly proper, provided they do not interfere materially with the standard of strength which has been previously current. But great changes in the strength of medicines may generally be regarded as pernicious, serving to perplex apothecaries and deceive physicians, if not to kill patients. It is to be regretted that in the different pharmacopœias which have been published among us, there are operative medicines bearing the same names, in some of which the strength is double that of others. As to the more complex medicinal formulæ which crowd our books, it will be found that most of them owe their place in the shops to some fashion, or some traditional celebrity, rather than to any exclusive fitness or virtue; and we may perhaps get a true idea of their value from the consideration, that if, by any means, the knowledge of the whole of them should be lost, it is not probable, in the doctrine of chances, that one in fifty would ever be reinvented. Yet, since the prevailing traffic requires that they should continue to be made and sold, it is important for those who consume them, that they should be exempt from fluctuations of character.

In the United States, previous to 1820, there was no uniformity of pharmaceutical language. Pharmacopœias, indeed, had been adopted by medical bodies, in Massachusetts and some of the other states; and Dispensatories, both foreign and native had been published among us. But in the year referred to, an effort was made, by which the consent of a great majority of the medical institutions of the country was obtained, for a plan of a national pharmacopœia. This it was confidently hoped, by introducing a current language throughout the country, would do away the confusion which then prevailed, and offered to the parties concerned, a facility of intercommunication, corresponding to that which results from a common system of coinage, or of weights and measures. A numerous and highly respectable delegation was appointed, from most of the prin-

cipal states, a part of whom met in the city of Washington, at the appointed time.

It may here be proper to enquire what such a convention could reasonably be expected to do, and what it was their duty to do, under the circumstances in which they were placed. Coming together from remote places, and holding their session at an inconvenient sacrifice of time and expense, it was not to be anticipated that they would institute an original investigation of the whole subject. The ordeal of an experiment upon every doubtful subject, would have involved a labour of months, and perhaps of years. It would not reasonably be expected that they would produce a pharmacopœia, which should be better than any which previously existed. A debating assembly would be far less likely to do this, than a competent individual in his closet. Yet the convention possessed the power to confer a great good; a power which no individual is likely to obtain, that of introducing order in the place of confusion, and law instead of anarchy.

Under these circumstances, it was incumbent on them to produce. or sanction, some standard of pharmacy which should be adequate to the wants of the community. It was not very material what one, among many standards, they should adopt as their basis. They might have selected the Edinburgh Pharmacopœia, which, though prolix in its expressions, was at that time more current than any other in the country. Or they might have taken the London Pharmacopœia, dogged as it has been by Mr. Phillips, and this would have served very well as the ground-work of a useful book. Or they might endeavour to frame a system of their own, which, in some respects, might be superior to its predecessors, or at least better adapted to the customs and wants of our own country. The last plan was decided on by the convention, under the expectation, doubtless, that it would be more acceptable to their constituents. A programme of a pharmacopœia prepared by the college of physicians in Philadelphia, was adopted as the ground-work, and after being variously modified and augmented, was referred to a committee, with instructions to publish it.

It must necessarily happen that a work emanating from so many discontented sources, a part of whose contents must, from the nature of the case, be the result of compromise among the parties concerned, rather than of satisfaction to any of them; would be in some respects imperfect, disconnected, and redundant. Nevertheless, if it was on the whole better suited to the occasion than any other work actually existing, the public were bound to receive it with complacency, as the only standard which could ever become general among us. And

if criticisms were needed to point out the faults which it contained, they should have been made in a spirit of manliness and liberality, such as would have promoted the gradual reform and perfection, rather than the overthrow of the work. But several of the journals thought otherwise, and the pharmacopœia was obliged to undergo an ordeal, the severity of which far exceeded its deserts. The spirit of criticism was pushed with a zeal not according to knowledge, and in many instances the ignorance of the commentator, rather than the defects of the book, produced a reprobation of its contents. Nevertheless, the pharmacopœia was received, willingly by some, and reluctantly by others, and became, we have reason to believe, the prevailing standard, or at least, more prevalent than any other throughout the United States.

It was to be hoped, that when the period should arrive, which had been assigned by the convention for a revision of this work, a sufficient unanimity of sentiment would have prevailed, to direct into one channel whatever amount of skill and experience might be volunteered for its improvement, either by societies or individuals. It appears that numerous societies, in different parts of the union, feeling an interest in the revision and confirmation of the pharmacopœia, had appointed delegates to attend the expected convention at Washington in 1830. A part of the delegates thus designated were, agreeably to the provisions made in 1820, returned to the presiding officer of that year. But a greater number, who had not been formally returned, proceeded to Washington at the appointed time, and having organized a convention of such delegates as were present, and invited the coöperation of other medical gentlemen of eminence then in the city, proceeded to take measures for the republication of the work. In the mean time, a part of the delegates who had been officially returned to the former president, influenced either by convenience, or by the smallness of their numbers, determined not to convene at Washington, but held a meeting in New York, where they also proceeded to take measures for republishing the pharmacopœia, having likewise invited the coöperation of other medical gentlemen of note. Out of this want of concord have risen up two pharmacopœias, neither of which can strictly claim to be, by lineal descent, the legitimate heir of the original work; one, proceeding from a body not formally declared elected to the convention at Washington; the other, from a body who did not convene at Washington at all. We regret, during the long period of preparation, in which the proceedings of each party must have been known to the other, at least in a degree, that some compromise was not effect-

ed, so that the objects of both might be effected, with less trouble to themselves, and less expense to the public. It was not indeed in the power of the delegates at Washington to correct the original defect in their mode of election, but it was in the power of the delegates of New York to have gone to Washington, and there to have invited the coöperation of the other delegates present, especially as they appear not to have been afterwards fastidious in associating with their own body, undelegated individuals. Even after the original meetings had taken place, a slight spirit of conciliation in one or both parties, (we know not which was wanting in this respect,) would have produced harmony and unity in the end.

As things now are, it appears to us that the two works must stand upon their respective merits, as pharmaceutic compositions; and the public are called on to decide, whether either, and if either, which one, is entitled to be received as the national standard. And here, if it be asked what constitutes fitness or excellence in a pharmacopœia, we should answer simply, that such a work ought to contain and identify the medicines which are commonly used by physicians, that its preparations should be scientifically composed, that its language should conform to the most current language of the day, and that it should be complete as a system in itself, that is, should have a correspondence between its own parts. In these respects we think the Washington Pharmacopœia has greatly the advantage of its competitor. We observe in its list of materia medica, comparatively few alterations of names, and these are made mostly in conformity to the present language of chemistry. In the New York edition, the changes are exceedingly numerous, the new names being taken partly from the London Pharmacopœia, and partly invented for the occasion, so that the book has the aspect of an edition of some other work, rather than of the American Pharmacopœia. The references to authors, which are considered necessary by most pharmacologists, to identify the substances intended, are wholly omitted in this work. In regard to completeness and accuracy, the work of the Washington convention is prepared with much care and science, and with a correspondence of its different parts. In the New York edition we find a want of unity, such as attends hasty preparations, and a discordance often recurring, between the names of the articles themselves and those of their preparations.

In regard to the latter work, knowing the difficulties which attend this species of composition, and entertaining a high respect for the character of the gentlemen concerned, we forbear to fill our pages with commentaries on its redundancies and discrepancies. We shall

not therefore complain because Burgundy pitch is inserted twice under different names, in the materia medica, nor because the sulphates of quinine and morphine, figs, prunes, and some other articles required in the preparations, are not inserted in the materia medica at all. These things must be corrected with their pens, by those who may employ the book. On the other hand we are happy to perceive some improvements on the edition of 1820 in the greater accuracy of the chemical nomenclature, and in the introduction of some useful formulas. We think however that retrenchment, in the old work, was much more needed than augmentation.

Believing that the pharmacopœia produced by the Washington convention, being a more elaborate, accurate, and finished work, will eventually become the standard of the country; we propose to enter somewhat more at large into the consideration of its contents. This we shall endeavour to do with the impartiality which the subject ought to receive.

In their preface this convention express their reasons for adopting as their basis the Pharmacopœia of 1820, a work having many inconveniences and defects, but at the same time many claims to approval. In its general outline, say they, and prominent features, it will bear a favourable comparison with the best pharmacopœias of Europe, and it is only in filling up, that improvement is demanded, or admissible. The changes therefore which have been made under the authority of the late convention, embrace the materials and minor arrangements, without extending to the general plan. In preparing for the press the present revised edition, the new convention inform us, that much labour has been expended, and every part of the work submitted to the most strict and rigid scrutiny. Every accessible pharmaceutic authority has been consulted, and the accuracy of processes has been frequently tested by a practical investigation; the several departments have engaged the attention of individuals peculiarly qualified by their previous studies, and the whole has passed the examination of pharmaceutists of acknowledged eminence in their profession.

Considering how difficult it is to induce persons of the necessary competency to engage in gratuitous labours with perseverance and fidelity, we are happy that the individuals concerned in the present revision, have devoted themselves with such singleness of purpose to the perfecting of the work. From our knowledge of the amount of labour actually bestowed on it, and from the internal evidences which it bears of extensive enquiry and precise examination, we

doubt whether any future convention will present us with results more deserving of the public confidence.

In pursuance of the plan of the former edition, and for reasons which it is not necessary here to repeat, the pharmacopœia is written out on opposite pages in Latin and in English. The classical latinity of the London Pharmacopœia is adopted as a standard, and by keeping this in view, a unity of style is preserved throughout the book. We see no cause to be dissatisfied with the general purity and elegance of this language, though in one case, we observe, the convention have erroneously followed the London example, in using the genitive "rosmarini," and ablative "rosmarino," instead of the undoubted *rorismarini*, and *roremarino*, sanctioned by HORACE, COLUMELLA, and other classics.

In regard to names, the convention informs us in their preface, that for reasons which they discuss at length, they have adopted the modern chemical nomenclature, in which the names are expressive of the composition of bodies. This was in most cases done by the framers of the former pharmacopœia, but in the present edition an attempt has been made to bring the nomenclature more completely into accordance with the best scientific usage. Thus we have *chloride of sodium*, instead of *muriate of soda; ferrocyanate* of iron, instead of *prussiate* of iron, &c. In a few instances, however, to avoid great circumlocution, a pharmaceutical name is retained in the place of a more expressive chemical appellation, as in the case of alumen, hydrargyrum, ammoniatum, &c. In conformity with the present language of chemistry, the proportional composition of bodies, it appears, is intended to be expressed, and we have among other things a *bicarbonate* of potass, and a *bicarbonate* of soda. But this intention is not always executed throughout the work, which seems to us a defect in uniformity. The substance called by this convention sulphate of copper, is a bisulphate, and ought so to be called in a chemical nomenclature, since there is another sulphate, composed of one equivalent of acid and one of peroxide of copper, which is precipitated by adding pure potass to the solution of the bisulphate above mentioned, in a quantity insufficient for separating the whole of the acid.

We know not for what reason it has been thought proper to omit, as synonyms, certain commercial names of common usage, while others of much less frequent occurrence, are retained. The student of pharmacy who would know what is meant by Epsom salt, Glauber's salt, blue vitriol, and other names which meet him in the daily price-current, must seek for information in other books, than the American Pharmacopœia. These names being international, and long establish-

ed, cannot, we think, with propriety be given up, in a work of general pharmacy.

In the nomenclature of substances derived from the vegetable kingdom, the work before us adheres to the simple and appropriate plan of the first edition, that of using in all practicable cases, a single word for the name of the drug, leaving its nature and origin to be defined in the opposite column. This peculiarity of the American Pharmacopœia is one of its leading excellencies, and one which the New-York convention seem to have acted unwisely in abandoning. Most of the names used in other pharmacopœias, to express vegetable substances, are either unwieldy in their length, or improper in their application. Thus the drug assafœtida is called by the Edinburgh college gummi resina ferulæ assafœtidæ, a name which is highly descriptive, but inapplicable to common use. By the London college it is called assafœtidæ gummi resina; but as the term assafœtida alone is not the name of any plant, in any botanical system of the present day, the whole name is incorrectly composed. The simple name of the drug, assafœtida, is undoubtedly better than either. In like manner columbo may be called by the simple name colomba, or by the circuitous name cocculi palmati radix, but not calumbæ radix, for there is no such plant as calumba. The American Pharmacopœia has another advantage in using simple names, whenever the drug happens to be derived from several plants, as camphor, senna, rheum and aloe, or from several animals, ichthyocolla. In the present edition, a slight variation is made from the former, in using the Latin name of the article always in the singular number; as cantharis, caryophyllus, prunum, instead of cantharides, &c. This method preserves uniformity, and is supported by the usage of Celsus in similar cases.

As in the former edition, the materia medica list is divided into two columns, the first of which contains the officinal name of each article, in Latin and English, together with occasional synonyms; while the other defines the substance intended, and gives explanatory references. This part of the work gives evidence of a laudable degree of care and research, yet we notice a few minor things deserving of remark. The substance called lupulin, derived from the hop, is defined "strobilorum pollen." As the word pollen has, in vegetable physiology, a specific meaning, it would have been better to have used some other name, to express powder. In the Latin, *lupulia* as used by the New York convention, is more consonant to morphia and quinia, than *lupulina.* We see no reason for giving up *spermaceti,* the universally received name, both in chemistry and commerce, and

substituting *cetaceum* of the London college, a word which is neither more classical, nor more definitive. *Scabious* applied to erigeron, is a provincial misnomer, that name belonging only to Scabiosa.

In regard to preparations, the convention considering this the most extensive and important part of the work, have devoted to it a greater share of their attention. They inform us that examination has been carried into all its parts, and not a single process has been allowed to escape a close scrutiny. One of the most prominent defects of the original pharmacopœia was a want of uniformity, both in the manner of conducting the processes, and in the style of describing them. This arose from the variety of sources from which materials were drawn, and the want of due time to remould and shape them, so as to produce a harmonious whole. In the present edition, an effort has been made to supply these deficiencies, and to produce uniformity of language, as well as correspondence and unity of design, in the different parts of the work. In the selection of the process for each preparation, two principles are stated to have governed the choice of formulæ, independent of their intrinsic merit, which, when superior, has always been allowed a predominating influence. When two or more methods of preparing the same compound, equally meritorious in themselves, have come under consideration, that has been preferred which has united in its favour, the widest prevalence in this country, and the sanction of the majority of the British pharmacopœias. It is considered highly desirable, that uniformity in the preparation of medicines should everywhere prevail, for the benefits accruing from the mutual interchange of the medical writings of different civilized nations, must be greatly affected by any material difference in the nature or composition of the remedies employed. This remark is especially applicable to Great Britain and the United States, and to all countries where the English language is generally used. It is a duty, therefore, say the convention, which we owe to the cause of pharmacy, to throw our weight into the scale which already preponderates, and thus contribute to the production and maintenance of the desired uniformity.

In those cases where the chemical formulæ of the original pharmacopœia have been found to be defective or objectionable, their place has been supplied by more accurate and practicable rules, founded on a course of careful investigations. In this way, the economy and uniformity of certain processes is greatly promoted. New preparations, which have been brought to light by the uncommon progress of pharmaceutic investigations, during the last dozen years, are, in va-

rious instances, inserted. Such are the preparations of iodine, quinine and morphine. The convention, however, have shown a wise forbearance, in not crowding their book with the host of new articles, often, we apprehend, more curious than useful, which modern chemistry has been enabled to extort from vegetable drugs. Retrenchment has been freely exercised in lopping off many of the superfluous formulas, which a necessity for hasty compromise had caused to be introduced into the pages of the old pharmacopœia; and, among other articles dismissed, is the acetum opii, or black drop, a revived piece of antiquity, wasteful in its composition, and utterly uncertain in its strength; the place of which is now better supplied by the acetated tincture of opium, and the acetate of morphia. For ourselves, by the way, we lean to the opinion, that opium, to produce its full benefit, must be opium still, and we are not sure that any of the artificial salts of morphia, are better than the natural meconate. We have seen delirium tremens brought on under the use of denarcotized laudanum. If the crude drug were cumbersome from the bulk necessary to form a dose, as in the case of cinchona, it would be highly useful to reduce its active ingredient into a smaller compass. But this is not the case with many of the narcotics.

Very complex medical formulas, such as abound among the old writers, and still encumber the pages of many of the pharmacopœias, we deem to be a superfluous appendage to medical science. One of the greatest modern improvements, is found in the simplification of medical prescriptions. The art of prescribing appears to us a more simple affair than it has been represented by the hypercritical pedantry of Dr. Paris. We admit that adjuvants will help, and that corrigents will correct; nevertheless, we find that castor oil, ipecac. and opium, will often do their duty without either. In admitting the influence of chemical considerations, in the exhibition of medicines, it is important to recollect that the stomach has a chemistry of its own, and that the digestive organs exert a material controul over the force of ordinary chemical agents; separating elements which have strong mutual attractions, and dissolving bodies which are insoluble in common menstrua. We ought by no means to consider medicines inert, in proportion as they are insoluble, for we have a proof to the contrary, in calomel. Nor are we to consider those substances medicinally incompatible, which if mixed out of the body, occasion a precipitate, or a change of colour. What incompatible, we would ask, destroys the effect of opium, arsenic, or cantharides?

Another consideration which has great weight with writers on

chemistry and pharmacy, is the exactness and precision of the quantities employed in their preparations. This circumstance, although of great consequence in strictly chemical compounds, is less so in arbitrary mixtures; and in the administration of simpler medicines, its importance diminishes still further. Practical physicians know, that a degree of accuracy, approaching nearer than within a fifth or sixth part of the amount desired for producing a given effect, is seldom attainable. Apothecaries divide their pills and powders by the eye, and patients take liquids by drops and spoonfuls. Nay, that physician must possess uncommon shrewdness, who even after apportioning his dose by the most accurate weight and measure, can foretell with certainty, how or when, how much or how often, it is going to operate. The stomachs of different patients, and those of the same patient at different times, vary more, if possible, than the samples of the same drug in commerce.

On these accounts we feel but little concern for the changes which the convention have thought proper to make in the character or strength of preparations and compositions, so long as they do not exceed the limits above mentioned. But in a few cases we observe that the strength has been altered in the proportion of two to one, or vice versa, and of such changes we propose to take notice. The vinum antimonii, which in the old edition contained four grains to the fluid ounce, in this edition contains but two, and is therefore reduced in strength one-half. We object to this change, because the stimulating character of the menstruum is incompatible with the indications for which antimony is generally administered, and we apprehend that a glass or two of Teneriffe wine would do no good to a man in apoplexy, or incipient fever. The wine indeed, ought to bear as small a proportion as possible to the operative medicine, and if the London college is followed in lessening the proportion of antimony, it should also have been followed in diluting the wine largely with water. The vinegar and syrup of squill are increased to twice their former strength, a change in itself of no consequence, when the public shall have learned to regulate the dose. Liniment of ammonia is reduced to one quarter of its former strength. Can this preparation ever be too strong for the purposes to which it is applied?

In a work so generally uniform and consentaneous in its parts as the American Pharmacopœia, we would willingly have dispensed with such names as pulvis aromaticus and pilulæ catharticæ compositæ. These names designate nothing which is not common to a thousand other combinations.

A few things are omitted in this edition, which we would have willingly seen retained; but we are not disposed to cavil on this account, since in that instance, as well as in the case of objectionable formulæ, the evil may generally be remedied by extemporaneous prescription. Every man has his particular taste and judgment, and de gustibus non disputandum. In the wine of antimony, to which we have objected, the evil is remedied by extemporaneous solutions in water, which are far preferable to those in wine. Even though a pharmacopœia should arrive at the highest and most unquestioned point of excellence, still physicians would suit themselves with formulas of their own adapted to particular cases. We apprehend that most practitioners pass their lives in ignorance of half the contents of pharmaceutical works. For ourselves, not being particularly given to hyper-practice, we should feel a strong sentiment of pity for the patients of that physician whose yearly rounds involved the application of a whole pharmacopœia.

To conclude, having indulged somewhat freely in our remarks on the national work produced by the convention at Washington, we proceed to make the *amende honorable*, by declaring our conviction, that it is on the whole superior to any of the European pharmacopœias with which we are acquainted, that it is better suited to the wants of the American community than any work of the kind which has been published among us, that it has emanated from a larger delegation and has undergone a more rigorous supervision than any similar production of the day, and that, therefore, it ought to become the standard of the United States. In conformity with the views expressed in the first part of this article, we also hope, that, to relieve the profession from the annoyance of incessant fluctuations, the contents of this book will be respected by all future conventions as something solid and permanent; and that if, as the edifice grows old, it shall be found to need repairs, enlargement, or modern decorations, still that its foundations may not be wantonly assailed, and that its walls may stand as a landmark and a barrier against the confusion of fluctuating language. J. B.

ART. XIV. *Exposition des Principes de la Nouvelle Doctrine Médicale, avec un précis des thèses soutenues sur ses différentes parties.* Par J. M. A. Goupil, Docteur en médecine de la Faculté de Paris, Demonstrateur à l'hôpital militaire de Toulouse, &c. &c. &c. 8vo. pp. 603, Paris, 1824.

Exposition of the Principles of the New Medical Doctrine. By J. M. A. GOUPIL, D. M. P. &c.

MEDICINE, one of the oldest and most important sciences to which the attention of man has ever been directed, is still enveloped in obscurity, still deficient in fixed principles, and subjected to the caprice of the ignorant and the prejudiced. When we reflect that this science has received the most devoted attention of some of the greatest men of almost every age, we are very naturally surprised at its present imperfect condition. But those who have examined the history of medicine, have ceased to wonder, that the greatest sum of genius and labour ever directed into one current, has failed to perfect a science, the almost unlimited extent, and extreme intricacy of which, are sufficient apologies for the unsettled state of many of its principles. We would by no means pretend that little has been done in medicine. The mass of facts collected is immense; the theories and hypotheses which have successively arisen and fallen are innumerable; and the number of well-established principles, though small in proportion, is still considerable.

Of all the systems of medicine yet proposed, that of BROUSSAIS is the only one strictly conformable to the Baconian principles, and therefore erected on an immoveable foundation. In reviewing the work before us, we shall adopt the analytical method, so successfully employed by some able reviewers, in the preceding numbers of this journal. In so doing, we shall, while we avoid all useless speculation and vain embellishment, condense, into the present paper, a greater number of the precepts of the illustrious reformer, and give a more connected view of his system, than could otherwise be done. All that we ask of our readers is, to examine the subject *fully* and *fairly*, even *experimentally;* this done, we leave the rest to reason.

The medical doctrines of Broussais are founded on observations made at the bed-side, and in the dissecting-room. They are in direct opposition to the empirical character of English medicine, over which they must finally triumph. The correctness of these princi-

ples depends on the accuracy of the observations from which they have been deduced, and the logical manner in which the deductions have been made; and their practical efficacy is the source of their present popularity and future stability.

The work of M. Goupil consists of a condensed view of the theses of several writers, very freely interspersed with his own observations. The first part of the volume embraces the subject of *irritation in general.* M. Goupil observes, that before the origin of the physiological doctrine, inflammation was the only form of irritation which had attracted attention; and that even that phenomenon was recognised in a few tissues only. He very justly ascribes to M. Broussais, the merit of accurately determining the symptoms of the various inflammations, and especially of those of a chronic kind. The thesis first quoted, is that of M. VIALLE, on irritation. This author states, that physiologists admit the existence of two fundamental properties; viz. sensibility and motility; to which they refer all vital phenomena. M. Broussais, (says Goupil,) denies the practicability of a distinction between sensibility and contractility; because the latter is, according to him, the only evidence of the former; and he makes contractility the principle, by the agency of which, all the vital phenomena are manifested. Yet Broussais believes, that the composition and decomposition of the tissues, are not the effects of the vital properties; but attributes them to a preëxisting "force vitale," and refers assimilation to the "chimie vivante," which, under the direction of the "force vitale," performs composition and decomposition. This is very abstruse; but we must allow, we think, a something existing before organization, and producing it; and also, that vital composition and decomposition are the results of chemical affinity, modified by a power which is very well expressed by the term "force vitale." M. Vialle observes, that the nerves and blood-vessels penetrate all the organs, and that by their condition we recognise health and disease. BROWN is correct in saying that life is preserved by stimuli. Some tissues possess more excitability than others: thus, the mucous membranes possess it in a greater degree than the skin, and this last in a greater degree than the cellular tissue; and as these tissues are not equally subjected to the influence of stimulants, it results, that one or more tissues may be irritated, or inflamed, while the rest of the system is in a state of debility. Ignorance of this fact was Brown's greatest error. Peculiarities of temperament depend on the excessive development of some tissue. Hence proceed predispositions to par-

ticular diseases. The action of stimulants produces that exaltation of the vital properties which constitutes *irritation;* and the abstraction of the usual stimuli generally produces the diminution of vital manifestation, which characterizes *debility.*

Irritation of an organ, and its consequent congestion, are effected by, 1st, the direct application of a stimulant. 2d. An impression sympathetically received from another organ already irritated. 3d. The absence of the usual stimuli. We have inflammation of the stomach from hunger. 4th. The diminution of action in some other organ. Exposure to cold, by checking the action of the skin, increases that of the lungs: hence, inflammation of the mucous surface, and even of the substance of the lungs. Living in damp rooms, with bad food and cold air, produces inflammation of the lymphatics, by diminishing the vitality of the heart and arteries. We therefore never have general excitement nor general debility; since the agents which excite one system of organs debilitate another, and vice versa. In fact, a very small blood-letting will sometimes increase a pulmonary inflammation, by debilitating the general system.

Irritation commences in the nerves, and is thence propagated to other parts. Where the irritation is confined to nerves, we have the diseases termed neuroses. But the irritation soon extends to the capillary vessels; the vessels become turgid, filled with red blood, hot, and painful. This is inflammation, a state of which irritation is the element. Under the influence of this irritation, the capillaries sometimes emit blood. This constitutes hæmorrhagic irritation, as seen in hæmoptysis, and in vomiting of blood from the irritation of an emetic. If the irritation be seated in the vessels which convey colourless fluids only, we have sub-inflammation, marked by swelling and accumulation of white fluids, without the presence of pain, heat, or redness; thence result scirrhus, tubercle, and other chronic degenerations.

The next subject is the local phenomena of irritations; and on this subject we quote the thesis of M. Duponchel. In internal inflammations, the situation of the organ often prevents us from perceiving the local lesion, and we must determine the nature of the case from the sympathetic derangements of other organs. In moderate gastritis there is often no pain of the stomach, while the head and limbs suffer considerably. Pain in the right shoulder is a common symptom of obscure hepatitis. Pain is therefore often absent in inflammation. Redness is always present during life. After death it is usually present, but sometimes is wanting. Acute peritonitis and

croup are examples; both sometimes failing to present a trace of redness. M. Begin has found the mucous digestive membrane white, after rapid death from corrosive poisons.

M. Vialle observes, that inflammations do not tend to subside on particular days. He gives the usual description of the course and effects of inflammation. M. Goupil then considers chronic inflammation, by which is meant, not a long-continued disease, but one of slight intensity and slow progress. Acute inflammation may subside into a chronic state, the characters and treatment of which differ from the former in activity only. The occasional effects of chronic inflammation seated in very vascular tissues, are hepatization, (the red induration of M. Broussais,) in the lungs, callosity of the skin and cellular tissue, and thickening of the mucous membranes. The red induration sometimes changes into white induration.

Sub-inflammations are rarely primitive, being usually excited by a preëxisting red inflammation. Thus, gastro-enteritis sometimes excites irritation and swelling of the mesenteric ganglions, and this complication of gastro-enteritis with lymphatic sub-inflammation constitutes tabes mesenterica. Tubercles are developed in the lungs by inflammation of the bronchial mucous membrane, or even of the parenchyma or pleura. These sub-inflammations remain long after the subsidence of the original red inflammation. Chronic irritation in the white tissues indurates them, and finally softens them by complete disorganization. This, in the lungs, produces phthisis, and a sympathetic gastro-enteritis supervening, we have hectic fever. Sub-inflammation is not confined to the lymphatic ganglions, but exists in the white vessels of any part. Pathologists have erred in attributing diseases of the lymphatics to debility of that system. The apparent debility depends on the predominance of the lymphatic over the sanguineous system. The lymphatic diseases are irritations of that system, the undue development of which predisposes to disease. Scrofula is an example. When both the lymphatic and sanguineous systems are active, scrofulous inflammation progresses more rapidly. Lymphatic diseases have been supposed to be atonic, because they may proceed from debilitating causes, and are sometimes cured by tonics. But these causes, by debilitating the circulatory apparatus, have directed the vital energies upon the lymphatic system, which, under these circumstances, becomes more subject to irritations. Tonics sometimes cure this irritation by exciting the circulation, and thus effecting a revulsion.

M. Broussais considers sub-inflammation as the origin of fatty,

steatomatous, and other analogous tumours. To the same cause must be referred the softening of bones, and the development of the chronic exanthemata, as tinea, &c. The most remarkable form of sub-inflammation is scirrhus. MM. Lemercier, Chanbiont, and Marechal, have written theses on this subject. They have ascertained that all the causes of scirrhus, and its more advanced form of cancer, are easily traced to irritation. Such are falls, blows, violent pressure, or friction, the long-continued application of stimulants to points affected with common inflammations, by which these are rendered malignant. In this case the irritation is seated in the white vessels, constituting scirrhus; and when extended to the sanguineous vessels it brings on carcinomatous ulceration. Certain constitutions are predisposed to cancer as to other diseases. Cancer is a local disease, and does not depend, as was once imagined, on a virus in the blood. Being a disease of irritation, it should be treated on the same principles as other irritations. M. Maréchal gives a minute detail of thirteen cases of genuine cancer, cured by local bleeding by means of leeches, a very low diet being also used. These cases deserve the particular consideration of the practitioner.

After giving, in a full and interesting dissertation, the facts and arguments from which the above observations are taken, our author proceeds to the consideration of *hæmorrhages and neuroses*. It has been observed that one effect of an irritation seated in the capillary vessels, is a disposition to pour out blood in considerable quantity. Hence, an important class of diseases, the successful treatment of which is peculiarly dependant on the correctness of the practitioner's theory. Physiological medicine has thrown much light on the theory of hæmorrhages, and has consequently, much improved the treatment of these diseases. Hæmorrhage was long supposed to proceed from a rupture of some large vessel of the diseased organ. Morgagni, and after him Bichat, ascertained that no rupture occurs, and that the blood is exhaled from the capillaries. The old humoral pathologists, visionary on all subjects, viewed it as the effect of a vitiated condition of the blood, which, becoming too fluid, escaped from the vessels. Brown unfortunately imagined all hæmorrhages to proceed from debility. Pinel, seeing symptoms of local irritation precede and accompany hæmorrhages, but sometimes overlooking these symptoms, supposed that it might proceed from either excess or deficiency of vital action. The latter opinion is now prevalent in England and in this country. It is, however, much opposed by the author of physiological medicine and his school in France; and hæmorrhage is

supposed by them to proceed in all instances from irritation. On examining a part to which a sedative has been applied, or which has been accidentally debilitated, we do not find an unusual quantity of blood in it, but on the contrary it is pale, cool, less sensible than usual, and evidently in an inactive condition. Apply an irritant, and the part reddens, becomes hot and tender, and inflammation or hæmorrhage comes on. Debility, then, excludes blood from a tissue, while irritation invites it. However great then may be the debility of the muscular and cutaneous systems, there is always local irritation in hæmorrhage. Very intense irritations may arise in the most debilitated habits, and in such we often see blood discharged from the intestines in dysentery, from the lungs in catarrh, and from the kidneys in inflammation of those organs. Hæmorrhages too are best cured by powerful debilitants, as is seen daily. Astringents, it is true, are often efficacious, but they are also useful in inflammations which are moderate. Scorbutic and petechial hæmorrhages are offered as examples of atonic hæmorrhage. The same error exists here also. They are symptomatic of visceral irritation, and are best removed by such treatment as is calculated to relieve that state.

Broussais has greatly limited the number of the neuroses; since the term strictly signifies an increase or decrease of action in the nerves alone, and since nervous disease seldom, if ever, exists long without involving the blood-vessels.

We come now to the subject of the *sympathetic phenomena of irritations;* to which subject M. Goupil devotes the third chapter of his work. Much of this chapter is derived from the thesis of M. Moncamp, on sympathies. We will not detain the reader with the first part of the chapter, in which our author offers some objections to some of the views of M. Moncamp and others, on sympathy. The most important deductions from this part of the chapter are, that the nerves are the true media of sympathy, and that, although disease developes sympathies between organs, which do not appear in health to be associated, yet it is probable that the sympathies do exist in health, though less strongly than in a pathological condition. The sympathies are modified by many circumstances. Those organs which are important, as the stomach, heart and brain, throw the whole system into commotion when diseased; while ligaments, the cellular tissue, and others produce much less disorder. The intensity of the irritation will obviously have great influence. The constitution of the individual also, has a great effect; the sympathies between organs being far less intimate in robust and lymphatic constitutions than in

those of a delicate and irritable habit. In such cases, diseases will produce different effects, and demand different treatment. The age, sex, and climate, as well as the cause which produces the irritation, are so many modifiers of sympathetic effects. Those organs, the sympathies of which are most extensive, receive the greatest number of impressions from other organs. It is from this fact that the gastro-intestinal mucous membrane becomes implicated in all extensive irritations. The irritations which arise sympathetically, do not differ from those which are idiopathic; meningitis produced by gastro-enteritis, and meningitis from a blow, not differing. The sympathetic irritation may rise above the original one, and form the prominent feature of the disease. A sympathetic irritation may be of a different kind from that which produced it. Thus, hæmorrhagic irritation of one organ may proceed from inflammation of another; and neuralgia may produce sympathetic gastritis. An irritation may give rise to another of the same kind; as in cancer, or tubercle; and this, according to M. Broussais, constitutes diathesis. It is important that the practitioner should be intimate with the sympathies, in order to avoid mistaking sympathetic for idiopathic diseases. In speaking of sympathy, as connected with therapeutics, M. Moncamp observes, that our remedies should be directed to the primary disease. Thus, we sometimes see an erysipelas suppressed in one place, reäppear in another; but if we remove the gastric irritation, of which the former is the effect, we effectually cure the cutaneous disease. M. Broussais frequently cures inflammation of the joints, by applying leeches to the epigastrium. Leeches to the joint itself would have failed, by leaving gastritis; and the disease would have been reproduced. A local inflammation produces fever by irritating the stomach, heart, and brain; and as the sympathies of the stomach are more extensive and intimate than those of the heart, we cannot have fever, without gastritis, or at least gastric irritation. In common fevers the irritation of the heart and brain does not rise to inflammation; but when the gastro-enteritis is very violent, the brain and heart are often inflamed.

The next subject is the *application of the phenomena of sympathy to the explanation of convulsions.* The more intensely an organ is excited the greater is its susceptibility of new excitement. If an organ receives sympathetically an irritation less than that of the organ primarily irritated, it only affords symptoms of the original disease. When the sympathetic irritation becomes intense, the original irritation often subsides. If, under these circumstances, the sympathetic irritation continues, and forms a new disease, we term the accident

metastasis; but if the secondary irritation also subsides, we term it a crisis. M. Goupil observes, that metastases may also be called crises. We may imitate nature by producing revulsions, or artificial crises. M. Goupil combats the hypothesis of those who suppose critical evacuations to be efforts of nature, to throw off unwholesome fluids. The diminution of the fever of small-pox, by the appearance of an eruption, is referred by the humoralists, to the expulsion of a virus. Why, says our author, is not the cure of pleurisy by perspiration explained in the same manner. Such absurdities deserve no further notice, our author having opposed them with unmerited patience. A cephalitis may result from the suppression of gout; and the inflammation of the brain is supposed by the ontologists to possess what they imagine to be the specific nature of gout. M. Broussais observes, that it were not more absurd to speak of mania in the toe, than of gout in the brain; gout being essentially an articular inflammation. An organ affected with chronic inflammation very easily receives irritation from another organ, and may produce a revulsion of the irritation seated in the latter point. Hence, if amenorrhœa and chronic gastritis coëxist, the first indication is to cure the latter, in order that the vital actions may not be diverted from the uterus. A sympathetic irritation may fail to cure the primary disease, by being too slight, or too strong. Thus, a slight erysipelas will fail to remove a gastro-enteritis; if stronger, it will relieve completely; or, if very intense, it will exasperate the gastric irritation. This last accident is termed a false crisis.

A gradual transfer of the vital energies from one entire system to another, is common. Thus, in sanguine temperaments, the vital manifestations are constantly concentrating themselves in the circulatory apparatus, and the most powerful sedatives are demanded for the controlment of the inflammatory diseases thus developed. The student, leading a sedentary life, robbed of the stimulus of exercise, and exhausted by nocturnal labours, to which he is tempted by his literary taste, finds his circulation languid, while the nervous and lymphatic systems begins to predominate, and he becomes the victim of nervous diseases, or is attacked with scrofulous irritation. The excessive development of the lymphatic system, is often associated with such a want of activity in the circulatory apparatus, as to induce the belief that scrofula is a disease of debility. This is incorrect; the circulation alone languishing while there is irritation of the lymphatics. Those measures which restore the activity of the circulation, tend to remove the lymphatic irritation. If we apply

leeches near inflamed lymphatics, at the same time that we advise a country residence, a nutritious diet, and exercise. it is only for the purpose of debilitating the lymphatics, while we operate a revulsion upon the circulatory organs.

The fourth chapter of the work under consideration, is devoted to the examination of *intermittent irritations*, and most of the observations are taken from the thesis of M. Mongellaz. It will be recollected by physiologists that the functions of the organs are intermittent. The stomach does not always digest, the muscles are not always contracting, nor does the brain produce uninterrupted thought. The same occurs in disease. The number of periodical coryzas, phlegmons, eruptive diseases, hæmorrhages, neuralgias, and other irritations is very great. M. Broussais first demonstrated the pathological character of these irritations. Inflammation, in the form of fever, is the most common form of intermittent irritation. Many kinds of intermittent fever were formerly enumerated. The fever was hepatic, pleuritic, or dysenteric, according to the intensity of the symptoms shown by particular organs. When no organ offered very prominent symptoms, the disease was simple intermittent fever. When there existed an irritation without fever, it was called a masked fever. Such was the delusion of the ontologists; dividing a disease into numerous imaginary beings, and even creating fever where no febrile symptom existed. They have even gone so far as to deny, that intermittent fever depends on local inflammation. But what grounds have they for their opinion? None; they merely refuse to grant the possibility of an intermittent inflammation. The proofs of our assertion are irresistible. The symptoms of intermittent fever, are those of other inflammations. Its causes are the same as those of other inflammations. It sometimes produces external inflammations, by the revulsive agency of which it is cured. This is merely a transfer of the gastro-intestinal inflammation, as happens in other inflammations. The evidence of post mortem examinations, is an irresistible proof of the inflammatory nature of fever. The ontologists object, that intermittent fever is cured by tonics. The objection is idle; as the tonics are administered in the intermission, when there is no inflammation, and usually increase the disease, if used during the fever. Even when this last does not happen, we are not surprised, since we see ophthalmia, diarrhœa, and gonorrhœa, often cured by tonics. The intermittent nature of the healthy functions, tends to give a similar character to the same functions in a morbid state. The causes of irritations are often intermittent. Intermit-

tent fever is most common in the spring and autumn; at which times the system is subjected to alternations of heat and cold; the days being warm and the nights chilly. Malaria, the most common cause of intermittent fever, exerts an intermittent influence. During the day the atmospheric poison is rarefied by the sun, and dispersed in the air, but at night it is precipitated in union with aqueous vapour, and the lower portions of the atmosphere are rendered noxious. Habit exerts an almost unlimited influence, both in health and disease, and an intermittent fever is sometimes kept up by it alone. These opinions on the intermittent character of the causes are due to M. ROCHE. Our author observes that some causes of intermittent fever do not generally appear to be intermittent. Even here, the intermittent nature of the healthy function affords a plausible explanation.

The fifth chapter of the work before us, is devoted to the consideration of the *treatment of irritations;* and here, particularly, we see the beautiful simplicity, and the practical utility of physiological medicine. Irritations are cured by debilitants, by revulsive irritants, and by stimulants applied to the irritated organ itself. Each of these plans deserve separate consideration. Debilitants are those means which abstract the principles of nutrition, or directly diminish the vital actions. Such are, abstinence from food, blood-letting, mucilaginous fluids, cold, and perfect repose. The thesis of M. FLAHANT furnishes valuable observations on general bleeding, the most powerful of the debilitants. When a vein is opened, the blood flows more rapidly into it, and is thus removed from the general mass of fluids, which becomes much less. The consequence is, that the brain, heart, and other organs, receiving less stimulation than usual, the vital actions of the irritated organ, as well as of the system in general, are diminished, and the irritation often removed. The effects of local depletion differ from those of general bleeding. The application of cups or leeches, produces, besides the loss of blood, a revulsive irritation, combined with congestion. If the flow of blood be free, the local irritation is in a great measure counteracted; while, if the depletion be slight, the irritation predominates. Hence, if we desire a moderate depletion with considerable revulsive irritation, we may apply cups; while, if we propose a more free depletion with less irritation, leeches are proper. Local depletion, when moderate, has little effect on the general system, emptying the capillaries and acting immediately on the surrounding parts. We must refer the effects of local bleeding to sympathy, since we cannot otherwise explain the rapid cure of gastritis or catarrh by the applica-

tion of leeches over the epigastrium or sternum; no capillary communication existing between the viscera and the skin. In inflammations of the membranes, general depletion is much less efficacious than local bleeding. In inflammations of the mucous membranes especially, we seldom completely succeed by general depletion; on the contrary, we often diminish the mass of blood, and exhaust the patient without at all affecting the local irritation and congestion, which, being seated in the capillaries, is not easily affected by depleting the large vessels. In these cases, therefore, we must apply leeches to the skin nearest the inflamed organ. When, however, the inflamed organ is very vascular, as are the parenchymatous structures, and the circulation is violent, the benefit of local bleeding will be temporary, unless preceded by general depletion. This fact is important in acute hepatitis and pneumonia. In chronic inflammations local bleeding alone is proper, and is our most powerful agent. In external inflammations, local bleeding is very efficacious, and should be practised as near the diseased part as possible, unless the irritation be great; in which case the leeches or cups should be placed at a short distance from the inflamed point. When the strength of the patient is sufficient, we may repeat our local depletion as often as it is required; but, in the state of extreme prostration occurring in the advanced stages of some inflammations, as in typhus fever, even local bleeding may prove fatal. Here we resort to other sedatives and to revulsives. We must not mistake for debility that false weakness and oppressed pulse so common in the commencement of inflammations: bleeding here developes the pulse and strengthens the patient. When local irritation is great, our local depletion must be free; otherwise cups or leeches may be injurious. To aid the effects of general and local bleeding, we must restrict the patient to the most rigorous diet, cold, and if the viscera be inflamed, use mucilaginous drinks containing a little citric acid. Too free a diet counteracts our depletion. Nervous irritation demands the same treatment; the diseases called nervous being generally [illegible] inflammations. For these precepts on the use of local depletion we are indebted to our author and to M. Labauc[illegible], with whom we fully concur.

Our attention is next called to the *application of revulsives.* Revulsion is the diminution of one irritation by exciting another in a different part. The following rules are taken from the thesis of our author. We must never attempt a revulsion of an irritation which excites fever, as it is too powerful to be removed, and will be exasperated by the new irritation. To this we have seen a few exceptions besides those given below. Never then apply a blister to the chest

in a pleurisy or peripneumonia so violent as to excite fever; such conduct being empirical and hazardous. Reduce the irritation by debilitants, until it cease to excite fever, and then apply revulsives to prevent it from becoming chronic. To the above rules there are some exceptions. In very violent inflammations of the brain and its meninges we must apply cold and leeches to the head, while the skin of the feet and legs is irritated by stimulants. In violent gastro-enterites. (ataxic and adynamic fevers,) when the important organs are congested, and there is too much prostration to admit of even local bleeding, we resort to revulsive irritants, applied to the [illegible]. Revulsion is practicable in these cases, on account of the diminution of sensibility. Chronic inflammations are successfully treated by revulsives; but if they be great enough to excite sympathies in other organs, they must first be reduced by debilitants. Thus, in chronic pleurisy, we must not apply vesicatories to the chest, until a low diet, and local bleeding, have controlled the action of the heart, and the heat of the skin. When an inflammation is transferred from one organ to another, we restore it to the first organ, by applying to it irritants, at the same time that we apply local bleeding, and other debilitants, to the second organ. If, for instance, an ulcer dries up at the commencement of a fever, we cannot re-establish the ulcer, without, at the same time, applying leeches and cold to the epigastrium. What has been said of revulsives in acute irritations, may be affirmed of the same means, in moderate irritations having great extent. What advantage can we expect from blisters, in a moderate inflammation involving the greater part of the peritoneum? Revulsives are almost always injurious to very irritable patients, and must be removed as soon as their bad effects are perceived. Where, from idiosyncracy, any organ is unusually irritable, we sometimes irritate it, by attempting to produce a revulsion from another organ, [illegible] accidentally exciting the latter. Richerand has seen a full meal produce empyema, by transferring the irritation of an ulcer to the pleura. It is dangerous to attempt a revulsion from one organ to another, which is very sensible, from the lungs to the stomach for instance. The artificial irritation should always be great enough to effect a revulsion without going so far as to rekindle the original disease. A cutaneous eruption, therefore, or a phlegmon, appearing in a fever, must not be interrupted, unless it becomes too violent. In attempting a revulsion from any organ, apply the revulsive to a part, the excitement of which debilitates the former. A revulsion is thus effected from the lungs to the skin. Avoid the application of revulsives to a point, the stimulations of which are reflected to the

diseased organ. We avoid, therefore, the use of blisters in gastro-enteritis. One exception to this has been mentioned; and another is, that we may irritate the skin, when the gastro-enteritis is the result of a suppressed cutaneous eruption; using internal debilitants at the same time. Hæmorrhagic irritation of the digestive mucous membrane, may also be treated by vesicatories to the abdomen; the hæmorrhage assisting the revulsive. Here we cannot agree with the author unless the fever be but slight. When a chronic inflammation is seated in a very vascular organ, if our revulsives do not increase the disease, we must not relinquish them too soon, but persist for a longer time than is usual; by which means we will generally succeed. Revulsives are successfully opposed to nervous irritations and hæmorrhages, as well as to inflammations. An issue to the chest will often prevent consumption in persons disposed to that disease.

We come now to the consideration of the various *irritants*, the application of which, to the treatment of irritations, has been much restricted, by rational or physiological medicine. Irritants have been much abused by ontologists. Emetics are prescribed for fevers, expectorants for catarrh, and emmenagogues for amenorrhæa. Fortunately for patients, the revulsive agency of these medicines very often counteracts their local effects. Tonics and stimulants should never be applied to the treatment of inflammations, especially when seated in the stomach and intestines. They renew the irritation, and give it a chronic type. Hence, the dyspepsias, and the scirrhus alterations of the stomach and intestines. Hence, the numerous cases of phthisis, brought on by expectorant balsams, used in the treatment of catarrh. The application of astringents, to the treatment of irritations of the kidneys, bladder, and urethra, as well as to the vagina, has given rise to innumerable cases of the most tormenting and incurable diseases; among which, is cancer of the os uteri. The irritants called antiscorbutics, should be banished from the treatment of scurvy; that disease consisting in a gastro-intestinal irritation, by which sanguification and nutrition are vitiated. Most of the diseases supposed to be nervous, and especially those of the stomach, are chronic inflammations; and in these, the antispasmodics are sometimes successful, but often injurious. Some of these diseases are, however, really nervous; and are often relieved by antispasmodics, provided the stomach be healthy. M. Goupil shows the fatal errors of the Italian contra-stimulant doctrine. He observes, that almost all their pretended contra-stimulants, are capable of exciting inflammation of the stomach. Of this, emetic

* In admitting this rule we would make allowance for extreme debility in some chronic cases, as in phthisis.

tartar is an example. He observes, also, that these medicines, like other irritants, cure inflammation, by revulsive secretions; and not, as the Rasorians imagine, by a debilitating action. Narcotics, and especially opium, are active stimulants, and produce much cerebral congestion. They must be used with much caution in diseases of infants and old persons, because there is a great predisposition in such persons to cerebral irritation. They must never be opposed to sleeplessness caused by a local inflammation. They may, however, be used in purely nervous agrypnia; a rare disease. On account of their irritating properties, they must be avoided in all inflammations, both acute and chronic; their revulsive action often failing to occur. In chronic colitis, however, says M. Goupil, when there is neither pain nor fever, no tenesmus, and the evacuations moderate, and not bloody, opium is very useful. Besides this exception made by Goupil, M. Broussais observes, in his Histoire des Phlegmasies Chroniques, "l'opium nous reste encore: c'est toujours la meilleure ressource contre les irritations de la poitrine qui refusent de céder aux antiphlogistiques, et qui sont exaspérées par les irritans révulsifs."

M. Goupil observes, that there are few diseases, in which the empirical use of emetics has not been common and injurious. Emetics are dangerous in plethoric habits, as they sometimes excite apoplexy. For the same reason, they must be cautiously used in very young, or old persons. Nervous irritability forbids their employment, on account of the risk of convulsions. Hepatic diseases should not be treated with emetics; since these medicines strongly excite the liver, and often increase irritation. In bilious fever, the liver is always much irritated, and demands sedatives. Emetics often cure gastric and hepatic diseases, by the revulsive evacuations which they excite; but they often fail to produce revulsion, and here they exasperate the disease: such cases occur daily. Emetics, given during the menstrual period, may produce amenorrhæa or menorrhagia: and during gestation, they may cause abortion. During the flow of the lochia, they are very dangerous, on account of the extreme irritability of the abdominal viscera at this period. In pleuritis, peritonitis, and in fact, in all inflammations, they are dangerous;* especially if the irritation be sufficiently intense to excite gastric sympathy. For the same reason, they should be banished from the treatment of hæmorrhagic irritations. In apoplexy, their danger is so great, that it were superfluous to say more, than that all physiological physicians avoid them. We are disposed to except cases evidently resulting

* This opinion seems to us to be carried too far

from food recently taken. In palpitation of the heart, and in the pretended neuroses of the stomach, they are manifestly hazardous.

Like emetics, purgatives have been very fatally employed by the humoralists. They should be used as seldom as possible during gestation, as they sometimes produce abortion; especially in women predisposed to this accident. During the lochial flow, they may produce metastasis to the mucous membrane. They are improper during lactation, as they communicate purgative qualities to the milk, and may even stop its flow, by metastasis to the mucous membrane HIPPOCRATES very justly forbids them in acute diseases. In simple gastro-enteritis, they are, of course, improper. In eruptive fevers, also, they tend to suppress the cutaneous eruption, by concentrating the irritation upon the mucous membrane. They are generally injurious in acute inflammations of the kidneys, bladder, and urethra. In peritonitis, they are very dangerous, from the irritation which they excite in the mucous membrane and peritoneum. In the chronic form alone of this disease, are even laxatives admissible. In moderate hepatitis, they usually produce a temporary relief, by the revulsion effected upon the intestines: but the relief is momentary, and the permanent effect highly injurious. In rheumatism and gout they are improper; because they cannot act on the local irritation, and because they increase the gastric inflammation of which the articular disease is very often the effect. In hæmorrhagic irritations they are improper, as well as in nervous diseases and organic degenerations; from the general principle, that they tend to increase the irritation already existing. For these important cautions, with respect to the application of irritants to the treatment of irritations, we are indebted to M. GOUPIL and M. VALLEE. Our author next presents a very interesting analysis of the thesis of M. GERARD, on digitalis. M. Gérard ascertained, by experiments made on himself, that the alcoholic extract is the most active preparation of this vegetable. Also, that minute doses taken into the stomach, diminish nervous sensibility, and muscular vigour, and reduce the frequency of the heart's pulsations. That if repeatedly used, it inflames the stomach, and excites the action of the heart. That it is not a diuretic. That it should not be used in any case, when the stomach is diseased; but that it is very valuable in inflammations, when applied by friction. All these principles would be fully established, did our limits permit: its diuretic properties are, however, still asserted. The last section of the present chapter is occupied by a very excellent dissertation on convalescence; partly taken from the theses of MM. QUEMONT and RENNES. We regret that our limits prevent a

full analysis of this section. The most important practical conclusions are, that we should never dismiss our patient during convalescence, since a chronic irritation is often mistaken for that state. That he should avoid all the causes which may produce the disease from which he is recovering. That he should never use a free diet, for the purpose of restoring strength; since, from the almost invariable tendency to relapse, that accident will be very apt to occur: his diet should be moderately nutritious, without being at all irritating. The whole tribe of tonics, emetics, and purgatives, should be shunned during convalescence; since they daily produce relapses, by irritating the convalescent organs, still very irritable, and perpetuate the diseases in those chronic forms, more to be dreaded than the acute inflammations.

We have attempted to give as full an exposition as circumstances would allow of the leading principles of the only philosophical system of medicine ever offered to the world. To the medical practitioner we recommend the application of these principles to the treatment of diseases. If strictly and judiciously pursued, they will never fail him in any case not beyond the reach of art. We proceed, without further comment, to the next part of the work before us.

The second part of our author's volume is devoted to the consideration of *gastro-enteritis*, or inflammation of the mucous membrane of the stomach and intestines. We pass over several pages, in which is contained a very interesting exposition of the numerous and important discoveries made by M. Broussais. It will suffice to observe, that until he devoted himself to the examination of the subject, little was known of the characters of gastro-enteritis and of chronic inflammation in general, and that the treatment of many diseases was consequently empirical. M. Goupil gives an analysis of the theses of MM. Moncamp and Foucault, on the sympathies of the gastro-intestinal mucous membrane. The sympathy between the stomach and brain is very intimate. A moderate stimulation of the stomach produces a lively flow of ideas, as after taking moderate quantities of wine, while indigestion is often accompanied with head-ache and other symptoms of cerebral disorder. Poisons taken into the stomach produce head-ache, vertigo and delirium. The connection of the eye with the stomach is known by the gastric origin of ophthalmia and amaurosis, both being often cured by means calculated to remove gastric irritation. Worms in the intestines produce dilatation of the pupil. Riga gives the case of a person, in whom any irritation of the tympanum caused vomiting. This is only an uncommon degree of an universal sympathy. Worms in the intestines produce itching

of the nose, and a disgusting odour and vomiting. The sympathies of the skin with the stomach are very numerous. Soon after eating the skin contracts and becomes cooler, but in a short time it is warmer than before eating. All the eruptive fevers are cutaneous inflammations caused by gastro-enteritis, and the chronic cutaneous inflammations are usually kept up by gastric irritation. The locomotive apparatus is closely associated with the stomach, as is evinced by the strength conferred by tonics, and by the extreme weakness occurring in all intense gastric irritations. Inflammation of the joints, constituting gout and rheumatism, is often caused by gastritis, and cured by the application of leeches to the epigastrium. The pulsation of the heart is influenced by almost every impression made upon the stomach. The salivary glands, liver, kidneys, and lungs, sympathize with the stomach; gastritis deranging the secretions of the glands, and sometimes exciting what has been called a gastric cough. The genital organs are stimulated by a moderate excitement of the stomach, but acute gastritis produces an opposite effect. Pregnancy is announced by nausea, and gastritis excites vomiting. The several parts of the digestive mucous membrane are intimately associated. Gastric irritation renders the tongue red or foul, and titillation of the uvula produces vomiting. The compression of the intestines, as in hernia, excites violent vomiting. We thus see that no organ can be considerably diseased without deranging the gastric functions.

The best of the theses offered on the *etiology of gastro-enteritis*, is that of M. Chauvin. He divides the causes into those acting immediately on the stomach, those which make their first impression on some other organ, and those which act both mediately and immediately. Among the former he classes all the highly-seasoned and stimulating articles of food, putrid fish, alcoholic and other stimulating liquids. Also tonics too freely used for the purpose of assisting digestion. Emetics, used frequently, or in that state of the stomach in which the tongue is foul and the secretions of the mouth bitter. Purgatives, often used, or used in large doses, especially in an irritable state of the stomach, are common causes of gastro-enteritis. Acrid metallic salts, and many vegetable poisons, belong to the first class of causes. Worms are usually considered as immediate causes of gastro-enteritis, but M. Chauvin is disposed to view them as more usually the effect rather than the cause of this state. He does not believe them capable of perforating the intestines, and supposes them to reach the peritoneal cavity through openings made by ulceration. Among the sympathetic causes, we find those which act upon the skin, as cold causing colitis, and heat inflaming the

stomach and small intestines. Malaria, also, might have been included. Acute cutaneous inflammation is often repeated in the digestive organs. Inflammation of any organ sufficient to excite fever, always induces gastro-enteritis; hence there is no fever without this condition. The same may be said of wounds producing traumatic fever. The suppression of any evacuation is a very common cause of this disease. Violent physical exertion is a cause with which most persons are familiar. The passions, when highly excited, often give rise to gastric inflammation; in fact, they affect the stomach more than the heart. Anxiety always destroys the appetite, and finally produces fever. Gloomy ideas, from whatever cause they proceed, seldom fail ultimately to produce chronic gastro-enteritis, and unless cheerfulness be restored a cure is almost impossible. Intense and long-continued study often developes gastritis, and, the brain being excited, mania may follow. As mixed causes, M. Chauvin mentions the ingestion of cold water while the body is much heated, the action of miasmata, and irritation of the liver. We are willing to coincide with M. Chauvin so far as respects the first and last of these causes, but we would in preference refer miasmata to the class of sympathetic causes, as we can find no evidence that they act immediately on any other than the cutaneous and pulmonary surfaces.

Our attention is next called to the *phenomena of acute gastro-enteritis*; by which term must be understood inflammation of the stomach and small intestines. It may commence suddenly or slowly. The patient complains of heat, and weight or compression of the stomach after meals, with lassitude and general uneasiness. The throat becomes hot and dry with thirst, and the complexion pale or yellowish. The mucous membranes of the nose, eye, or œsophagus sometimes inflame. The appetite is usually diminished, seldom increased. We have seen some cases in which intense hunger accompanied violent fever. Digestion is painful, with nausea, sour eructations, constipation, or sometimes diarrhœa. The disease often begins with gastric oppression. There is loss of appetite with fulness of the stomach; the mouth being clammy or bitter, the tongue thick and covered with a white or yellow coat. This state is usually removed by low diet. Emetics often remove it, but are liable to develope intense fever. Gastro-enteritis often commences without these warning symptoms. There is vomiting of mucous or bilious matter, or else purging with colic and tenesmus. There is usually tenderness of the epigastrium; a very important symptom. This, however, is not always perceptible, for the gastric nerves being principally ganglionic, their sensibility is not easily developed. The skin of the epigastrium is often

hotter than that of other parts. The sympathetic symptoms are important. Head-ache is almost always present, and the cerebral irritation is sometimes so intense as to excite delirium, with diminished sensibility, muttering, paralysis of the bladder, involuntary dejections, and other symptoms of the adynamic fever of the ontologists The delirium may be violent, with convulsions, subsultus tendinum, picking at the bed clothes, and other symptoms of the ataxic fever of the ontologists. It would seem that in adynamic fever the irritation extends to the substance of the brain, while in ataxic fever the meninges and surface alone of the brain suffer. The heart is strongly irritated in the disease before us. In the commencement the pulse is sometimes, but not often, as fully developed as in parenchymatous inflammation. Its most common state is rapidity with smallness and concentration, sometimes intermittent, or almost insensible and convulsive. These last symptoms are very unfavourable. The pulse is sometimes little affected in the most intense gastritis, and this also is a bad symptom. The lungs receive the influence of the stomach, as announced by the rapid, laborious respiration, and the gastric cough and pulmonary inflammation may come on. The actions of the secreting organs are vitiated. The qualities of the bile are changed, and its quantity is increased, unless the hepatic irritation becomes intense. The urine is red, in small quantity, and excitepain when discharged. Towards the close of fatal cases the patient emits a peculiar odour, attributed by LALLEMAND to the absorption of urine. During the progress of the disease, the other mucous membranes redden, especially at their origins. The end of the urethra is red, as is also the mucous coat of the bladder. The conjunctiva is injected, the pituitary membrane dry, the mouth clammy at first, becomes hot and dry. The state of the tongue is an important index to that of the mucous membrane. In moderate gastritis it is usually large and whitish or yellowish, but as the irritation increases it reddens, in proportion to the acuteness of the disease. This redness of the edges and point of the tongue never exists without gastric inflammation, although acute inflammation may exist without extensive redness; and in this case, we observe a number of red or violet spots projecting above the mucous coat. This last symptom is more common in chronic gastro-enteritis. The middle of the tongue is usually whitish or yellowish, but in some cases the whole surface is red. It is more narrow, in proportion to the intensity of the inflammation. When the disease is approaching a fatal termination, the tongue, lips, and teeth are covered with a dark, fuliginous coat, which dries and cracks. In lymphatic persons and infants, aphthæ often appear

in the mouth. If the gastritis cease before the enteritis, we may have a premature appetite. Excessive thirst shows predominance of intestinal irritation. In gastro-enteritis the skin is hot, and uniformly dry, or covered with momentary perspiration. In the last stages the cutaneous irritation excites petechiæ, and the parts suffering pressure run into gangrene. In some instances an abscess appears in the region of the parotid, and may prove revulsive; or, if too acute, may increase the disease. In a few cases, the articular fibro-serous textures inflame sympathetically. The above symptoms, must, of course, vary with the constitution of the patient, the nature of the cause, and other circumstances. If the gastro-enteritis be considerable, from neglect, or the use of emetics, and the liver become implicated, we have bilious fever. Gastro-enteritis rapidly developed in a robust, sanguine subject, is principally displayed in the great activity of the circulation, and assumes the characters of inflammatory fever. The same inflammation occurring in lymphatic subjects, is principally exercised on the mucous cryptæ, and the gastro-intestinal mucus being abundantly secreted, we have mucous fever. When the nervous apparatus is excessively irritated, we have delirium, stupor, convulsive and putrid symptoms, in short, all the common symptoms of malignant fevers. We thus perceive that all fevers may be traced to gastro-enteritis associated with irritation of various organs. The epidemic and contagious fevers are gastro-enteritis, excited by vegetable or animal poisons dissolved in the atmosphere. M. Goupil gives, from the thesis of M. Gravier, an interesting account of an epidemic cholera occurring in India in 1817, and destroying more than six hundred thousand inhabitants. It is unnecessary to follow our author through the history of a disease so well known; but the treatment deserves some notice. M. Gravier attributes the extreme violence and extensive prevalence of this epidemic, to the fact that immense numbers of the inhabitants used, as a preventive, a camphorated and opiate solution advised by the English practitioners. They were also treated with stimulants containing calomel, opium, camphor, &c. The fatality of this treatment was lamentable. Correctly referring the violent vomiting and purging, and the extreme muscular debility, to intense irritation of the mucous membrane, M. Gravier avoided internal medicine as dangerous, prescribed absolute diet, and bled the patient.* The effect was most happy. The patient whom he found almost speechless, was, in a few hours, comparatively free from danger. More than a

* We are not disposed entirely to reject morphine internally, or to a blistered surface; but we have had no experience with it in this disease.

second bleeding was seldom necessary. It is to be regretted that M. Gravier had not the means of local bleeding, the most important part of the treatment of this disease.

A knowledge of the *phenomena of chronic gastro-enteritis*, is not less important than that of the acute disease. The observations on this subject are taken from MM. Goupil, Poutier, Schacken, Archambault, and Merot. Chronic gastro-enteritis is that state of the disease, in which the local and sympathetic symptoms are slight, and the digestion and other functions are not dangerously impeded. It may result from acute gastro-enteritis improperly treated, or from any of the causes of the acute disease. It is most apt to occur in persons of a bilious or nervous temperament, and in those devoted to literary pursuits, or subject to melancholy. The symptoms are so variable, that it is impossible to describe them in any determined order. The patient experiences at the epigastrium, a sense of uneasiness, or of pain, more or less acute, and extending to the hypochondria. There is often a sense of constriction, extending to the œsophagus, and even impeding respiration and deglutition. The epigastrium is sometimes tender, and at other times the chest is painful, and there is slight cough. Loss of appetite, (anorexia,) is common, and the digestion is painful, with acid or acrid eructations, (pyrosis.) The disease augmenting, there is fullness of the stomach, thirst, confusion of ideas, with a sense of weight in the head, and aversion to exercise; the skin, especially of the hands, becomes hot, and the pulse is quickened. A full meal often excites vomiting. There is, usually, constant constipation, which, however, is sometimes interrupted by a temporary diarrhœa. In children, the inflammation often extends to the mesenteric ganglions; and we then have tabes mesenterica, *(carreau.)* The tongue is usually contracted, and red at its point and edges. The redness may be less intense, and more extensive, or there may be only small, red points projecting through the mucous coat. The middle of the tongue has frequently a whitish or yellowish coat, which is more perceptible in the morning. The breath is fetid, and the thirst considerable. In the slighter grades of the disease, the heart is not affected; but it finally becomes excited, and a slight fever appears, which may become remittent or continued; and here there is danger of disorganization. The liver sometimes partakes of the irritation, and there is excess of bile, with a bitter taste, and a yellowish tinge of the countenance. The quantity of the urine is diminished, and its colour becomes reddish, or, in nervous persons, it is plentiful and limpid, as in hysteria. The

brain is usually implicated, and the patient is sad, morose, suspicious, and all the characters of hypochondriasis are finally displayed. The skin is commonly hotter after meals; but if the inflammation be too slight to excite the sympathy of other organs, the skin is colder than in health. The strength of the patient is much diminished, and atrophy finally appears; the skin sinking between the muscles, and adhering to them. Such are the principal symptoms of a disease which, from the excessive use of tonics, emetics, cathartics, and sudorifics, is but too common among us. This disease, however, sometimes assumes a character totally different from that above given, and the patient is tormented by that insatiable appetite, to which the name of boulimia has been given.

M. Goupil demonstrates the non-essentiality of several diseases, formerly misunderstood, and empirically treated. He points out the close resemblance between the above symptoms, and those of dyspepsia; shows that the causes of this disease are, all such as irritate the stomach; and that tonics, emetics, and other irritants, almost always aggravate the symptoms, after a momentary relief, while the treatment hereafter prescribed, always palliates or cures. True debility of the stomach, a rare disease, is shown by a large, pale tongue, no pain at the stomach, a feeble, but regular pulse, weakness, and total absence of all signs of irritation; and always yields rapidly to a wholesome diet, and mild tonics. Hypochondriasis, also, presents the symptoms of a chronic irritation of the digestive mucous membrane and of the brain; and to the treatment of this disease, we may apply the remarks made on dyspepsia. The results of gastro-enteritis, when the disease is treated with irritants, all tend to the destruction of life, by disorganization of the digestive apparatus. One of these results is scirrhus of some part of the stomach; announced by a pale yellow countenance, tumour, and lancinating pain at the epigastrium, and almost always, vomiting. When the disease is at the cardiac orifice, the pain is seated below the region of the heart, in the back, or the pharynx, and is increased on swallowing. When it occupies the body of the stomach, the patient is unable to take much food at one meal, and vomiting usually occurs soon after eating. If the disease occupy the pylorus, there is a hard tumour between the epigastrium and the right hypochondrium; and vomiting occurs two or three hours after eating, when the food is passing the pylorus. When the scirrhus runs into carcinomatous ulceration, the matter vomited is often bloody. It is well known to pathologists, that inflammation often destroys the cohesion of the tissues. It has been satisfactorily ascertained, that the

perforation of the stomach, formerly attributed by Hunter to the action of the gastric juice,* is the result of inflammation. M. Goupil quotes from the papers of MM. Gerard and Laisne, several remarkable cases of gastritis terminating in death, from perforation of the stomach.

Under the name of *colitis*, M. Broussais describes the inflammation of the mucous membrane of the large intestine, constituting the diseases called diarrhœa and dysentery. This inflammation may proceed from all the causes of gastro-enteritis, and especially from unripe fruits, and other improper food, and from vegetable and animal matter, in a state of putrefaction. M. Goupil observes, that it is never contagious, unless allied to typhus; as in some epidemics. When the inflammation is slight, it assumes the form of diarrhœa. Diarrhœa is attended with wandering pains in the abdomen, especially near the umbilicus, and a sense of fullness in the pelvis, relieved by the subsequent evacuations. The colic is sometimes considerable, and is relieved by pressure, or external warmth. The evacuations are usually small, and of variable frequency; and consist of softened feces, mucous, bilious, or serous matter, of various colours. If diarrhœa be slight, the sympathies are not excited; but when it be intense, there is thirst, anorexia, foulness and redness of the tongue, and lassitude. When the colitis is more intense, it assumes the form of dysentery. Here, the colic is acute, with small and frequent evacuations of mucous, bloody matter, or with ineffectual efforts to evacuate the feces. The disease progressing, the spasm of the bowels and the pain become intense; but the latter is little increased by pressure. The strength is exhausted as the disease increases. Under these circumstances, the stomach and upper intestine become inflamed; the mouth and tongue become dry and red; there is thirst, with soreness of the epigastrium, and in short, all the symptoms of gastro-enteritis, are added to those of colitis. Inflammatory dysentery is a gastro-entero-colitis, occurring in a sanguine subject. A combination of mucous fever and dysentery, constitutes mucous dysentery. If there be a predominance of bile, the disease is called bilious dysentery; and if the colitis be complicated with malignant fever, we have adynamic or ataxic dysentery. All these modifications have been divided, by the ontologists, into so many specific diseases. When colitis does not terminate in death

* We have seen the details of some cases, which we could not explain on any known principles.

or resolution, it passes into a chronic state. In this case, the colic ceases, and the stools become less frequent; and if the stomach be free from inflammation, there is, usually, a desire for substantial food; which, if granted, produces, a few hours afterwards, a painful colic, with increase of the symptoms. Chronic colitis, if not cured, is apt, eventually, to induce atrophy, with inflammation of some other organ, finally running into dropsy.

The thesis of M. Scoutetten, forms the fourth article of the present chapter. It presents a valuable exposition of the *pathological anatomy* of the *digestive mucous membrane;* and corroborates the pathological views of M. Broussais, by showing the evidences of inflammation, or even ulceration, left by fevers of all sorts, dyspepsia, boulimia, diarrhœa, dysentery, and a host of disorders, which, before the researches of M. Broussais, were misunderstood, and badly treated. As this very valuable paper does not contain any of the practical principles of the doctrine before us, we pass on to the next subject.

The next chapter contains an able defence of the *identity* of *gastro-enteritis* with the *essential fevers* of the ontologists. All the arguments against the positions assumed, are fairly combated, and the proofs adduced are so convincing, as to be, we think, irresistible, to every unbiassed mind. We had proposed to offer, at some length, the arguments of our author; but his paper is long, and almost incapable of further condensation. He proves that all the causes of fever are causes of gastro-enteritis. That the want of appetite, nausea, pain at the epigastrium, thirst, head-ache, heat and dryness of the skin, foulness and redness of the tongue, in short, that all the common symptoms of fever, are precisely those of gastro-enteritis. Also, that all the varieties of fever depend on the complication of gastro-enteritis with inflammation of some other organ, on the intensity of the disease, and on the temperament of the patient. We thus have bilious fever, when the liver is implicated, or ataxic and adynamic fevers, when the brain is intensely irritated.

We come now to the *treatment* of *gastro-enteritis* in its *acute form;* and in this, particularly, is the philosophical character of physiological medicine most evident. In inflammation of the stomach, as in other organs, M. Broussais avoids all irritants. He therefore forbids the use of emetics, cathartics, sudorifics, tonics, and all the perturbating means so much employed in fever. He allows that the disease is often cured by the revulsive irritations and evacuations, produced by these medicines, but observes that in many cases, they fail to produce revulsions, and rapidly destroy the patient, by their local

effects, or give the disease a chronic, and almost incurable character. The means now to be detailed, being more efficacious, and unattended with risk, are preferable to the perturbating and hazardous practice.

When a patient presents the preliminary symptoms of fever, as loss of appetite, foulness of the tongue, bitterness of the mouth, &c. his diet must be reduced to the use of rice water, barley water, cooked fruits, &c. with cold water, or lemonade; and if he be robust, a dozen leeches may be applied to the epigastrium. This usually prevents the attack. When the fever has commenced, the number of leeches must be increased, according to the strength of the patient; and when they fall off, the bleeding may be continued by fomentations. In children, and weak persons, the leeches must be used cautiously, and the subsequent bleeding stopped. If the patient be very weak before the attack. even leeches may be avoided. They may also be avoided, if the disease be preceded by chronic gastrò-enteritis. Should the disease continue, the leeches must be applied as often as is necessary. General bleeding is unnecessary, and sometimes even dangerous, unless the circulation be very violent, with great determination to the brain, lungs, liver, or some other large organ. No food must be allowed; and the drinks must consist of lemonade, solution of gum arabic, or tragacanth, or some other mucilage, acidulated with citric or tartaric acid. Emollient fomentations may be applied to the abdomen with advantage. If the epigastrium be very hot, iced water may be applied; and if delirium come on, the same may be applied to the head. When the patient is convalescent, we gradually increase the quantity of food; beginning with preparations of sago, rice, and barley. In most cases of fever, vesicatories and sinapisms are apt to do harm, and must be avoided. Where, however, intense cerebral irritation appears, with low delirium, stupor, or other cerebral symptoms, we first apply leeches to the temples, and ice to the head; and if these alone fail, we may add sinapisms, and even vesicatories, to the legs. Blankets soaked in hot water, and applied to the legs, are also valuable. Another case in which revulsives may be used in fever is, where a hæmorrhage occurs. The hæmorrhage, if there be little debility, and it be moderate, need not be interrupted; but if the patient be weak, or the bleeding great, we apply blisters or sinapisms, and not astringents; hæmoptysis demands a vesicatory to the sternum, and epistaxis to the back of the neck. Inflammation of the lungs, liver, or any other organ, occurring in fever, will demand local or even general bleeding. Should the gastrò-enteritis become so violent as to assume the form of typhus,

and the prostration become so extreme as to forbid the use of leeches, we then resort to acidulated mucilages internally, and apply fomentations and poultices to the abdomen, with sinapisms to the feet and legs. Four or five leeches may be applied to the epigastrium, and the bleeding stopped, if the pulse sink, but not so if it rises. The bowels must be kept open, during the whole course of the disease, not by purgatives, but by mucilaginous enemata.* Such is an outline of the physiological practice.

The *treatment* of *chronic gastro-enteritis*, (dyspepsia, boulimia, &c.) is very simple. If the patient be robust, confine him for a few days to absolute diet, and apply a dozen leeches to the epigastrium. After this, the treatment will consist in abstinence from all animal food, and the use of sago, rice water, barley water, small portions of very light bread, &c. This diet must never be violated. The occasional use of leeches, and the frequent use of poultices, will be required. The bowels must be kept open by enemata; never by laxatives. We do not fully adopt this generally correct precept. Moderate exercise will be useful; as also will the cold bath in summer, when the strength of the patient will bear it. The treatment must be pursued for months, if necessary.

The *treatment* of *acute colitis* will be very similar to that given for gastro-enteritis. Diarrhœa and dysentery, the common forms of colitis, demand the same low diet as gastro-enteritis. In addition to this, we apply leeches to any painful part of the abdomen, and to the anus. Cold, mucilaginous drinks, and poultices to the abdomen, will also be very useful. Internal medicines are generally improper: but when there is no longer fever, nor tenesmus, and no blood is discharged, gentle opiates are proper, and may be placed in the rectum, if the stomach be irritable. The treatment of chronic colitis differs from that of the acute disease, in little but activity. Here, however, the diet will sometimes require some addition, to support the strength. If the disease be slight, and the stomach healthy, a gentle tonic will assist digestion; but its effect must be closely observed. Mucilaginous and slightly narcotic enemata will be useful; and if there be no fever, tenesmus, nor frequent discharges, opium internally will be beneficial.

In the *treatment* of *intermittent fever*, the principles already given must be applied. In the cold stage, avoid stimulants, and allow

* In a few cases, even after local bleeding, enemata do not act sufficiently; here, we are accustomed, if the gastritis be not very acute, to use the mildest laxatives.

tepid drinks only. In the hot fit, follow precisely the plan above directed. This will often cure the disease; if not, resort to the sulphate of quinine. The quinine must not be used in the first intermission, nor in any subsequent period, while the tongue is red, the skin dry, or hot, or if there be thirst, soreness of the stomach, or any other febrile symptom. When, by a proper antiphlogistic treatment, we obtain a perfect apyrexia, shown by a regular pulse, little thirst, no heat of the skin, nor tenderness of the stomach, and a tongue sufficiently pale in its whole extent, the quinine will be safe and efficacious.

Common remittent fever requires the treatment proposed for gastro-enteritis: but some modification is required in *malignant intermittents* and *remittents*. When the disease is very malignant, and the patient is in great danger, we cannot depend on antiphlogistics alone, but must resort to the sulphate of quinine in the remission. If the stomach reject it, throw it into the rectum,* and rub the skin with the tincture of bark. Local bleeding, and other antiphlogistics, also, must be used, if the patient be sufficiently strong. If there have been several paroxysms, and the pulse be small, feeble, intermittent, the skin livid, and the patient senseless, avoid even local bleeding, apply to the legs and thighs the most rapid rubefacients, while a solution of several grains of sulphate of quinine is thrown into the rectum, and the skin is rubbed with the tincture of bark. The bark and quinine are dangerous in these cases, but without them the danger is greater.

M. Goupil goes on to the consideration of the *relations* of *gastro-enteritis* with *other inflammations*. In some preliminary remarks he observes, that the principles of the new doctrine are applicable to surgery. Traumatic fever is to be treated on the usual principles, and local inflammation from wounds must be relieved, if excessive, by local bleeding.

In treating of *hepatitis*, our author demonstrates that it is always caused by, or associated with, gastro-enteritis. All the causes of hepatitis act at the same time on the mucous membrane.† Such are improper food, tonics, emetics, external heat, &c. Acute hepatitis is preceded and accompanied by the usual symptoms of fever; and the chronic form is always combined with dyspepsia, hypochondriasis, or other symptoms of chronic gastro-enteritis. The treatment of acute and chronic hepatitis differs very little from that of the corres-

* Apply also several grains in powder to blistered surfaces.

† Excepting wounds of course

ponding forms of gastro-enteritis. The same regimen, local bleeding, and other means, must be used. Leeches to the right hypochondrium, also, are proper; and if the disease be acute, general bleeding will be required. The treatment must be pursued, until there remains neither fever, dyspepsia, pain of the liver or right shoulder, nor any other symptom of the hepatic disease.

In the next article he shows that the *exanthemata* are gastro-enterites associated with cutaneous inflammation. They commence with all the usual symptoms of gastro-enteritis, (fever,) which have been repeatedly enumerated. After a few days an eruption appears; which, if of proper intensity, is completely revulsive, and stops the fever. If the eruption be not sufficiently abundant, the cutaneous inflammation and fever co-exist. If the cutaneous inflammation become too intense, it is repeated in the mucous membrane, and the fever is increased. This last is the secondary fever of authors. Eruptive fevers require precisely the same treatment as simple fevers, until the appearance of the eruption. Here, also, the same treatment is proper, unless the cutaneous inflammation become intense; in which case we may apply emollient fomentations, and place leeches near the most highly inflamed points; especially on the face. This is particularly useful in confluent small-pox. If rosalia become complicated with angina, or measles, as is usual, with catarrh, leeches may be applied to the neck, and under the clavicles.'

Gastro-enteritis is often associated with *articular inflammation*, in the forms of gout and rheumatism. When the disease commences in a small joint, it is called gout; when it commences in a large joint, or in several small articulations, it is called rheumatism. There is no essential difference between these diseases. They may be confined entirely to the joint; but more usually they are associated with acute or chronic gastritis, or gastro-enteritis. The causes of gout are cold, metastasis of some irritation, improper food, especially the luxuries of the wealthy, the abuse of tonics, and all the other causes of gastro-enteritis. It is usually preceded by the symptoms of chronic gastritis, and it is well known, that any error of diet always aggravates it. The treatment of gout and rheumatism is very simple. If the disease appear to be entirely local, the patient is to be confined to a strict diet, and leeches applied freely to the joint, while the bowels are opened by enemata. If considerable fever arise, and the patient be strong, general bleeding may become necessary, with leeches to the epigastrium. In general, there will be symptoms of gastritis, either acute, or in the chronic or dyspeptic form. This will demand leeches to the joint and the epigastrium, with a low.

mucilaginous diet, and other treatment already mentioned as proper in gastro-enteritis. All internal medicines must, for an obvious reason, be avoided. These few facts and principles are taken from the valuable and extensive observations of our author, who is in some degree indebted to M. Roche.

Our author has compiled, from the works of Broussais, Lallemand, and Richond, some rational precepts on the subject of cerebral irritation, and its connexion with gastro-enteritis. It is universally acknowledged, that the principal phenomena of apoplexy, mania, epilepsy, tetanus, catalepsy, and some other diseases, depend on nervous disorders. M. Broussais has ascertained that all the alterations of cerebral structure, as well as serous and bloody effusions into or upon the brain, are effects of inflammation. We have already mentioned, that the delirium, stupor, subsultus tendinum, and other ataxic symptoms of violent fever, depend on acute irritation of the brain, excited by the intensity of the gastro-enteritis. In the violent gastro-enteritis produced by poisons, there is a series of nervous symptoms; such as delirium, vertigo, trembling, paralysis, &c. Opium, when swallowed in a large dose, produces a state resembling apoplexy. M. Lallemand has seen cephalitis produced, in the treatment of paralysis, by the internal use of the nux vomica, emetics, purgatives, and various other irritants. The premature use of the sulphate of quinine, in the treatment of fever, has produced paralysis. Extreme intoxication closely resembles apoplexy. This state does not proceed from the absorption of the alcohol; for it is removed by vomiting, and by dilute ammonia. Some wines, also, which contain little alcohol, produce intoxication more easily than some others containing more of the active principle. The same may be said of the mixture of wines. The diseases of the nervous system, as palsy, apoplexy, and others, are generally associated with symptoms of gastric disorder; and an error in diet often suddenly produces these diseases. The chronic diseases of the brain, as mania, (especially when periodical,) and idiotism, are almost always preceded and accompanied by symptoms of gastric irritation. From all these facts, as well as from others too numerous for present notice, our author justly concludes, that mania, hypochondriasis, &c. as well as most other cerebral diseases, are usually excited and kept up by gastro-intestinal irritation, in the same way as gout, hepatitis, &c. It is almost superfluous to say, that practice must be modified by the knowledge of these facts; and that internal irritants must be cautiously used in apoplexy and analogous diseases.

The last subject considered by M. Goupil is *asthenia* or *debility*.

M. Broussais has shown, that the number of diseases depending on debility is very small. Debility of an organ may proceed from the abstraction of its usual stimuli, or from an increase of action in another organ. The stomach is thus debilitated, by being deprived of all food, except insipid, mucilaginous liquids. The use of a blister, as a revulsive, is an example of the second mode in which debility is produced. Debility from abstraction of stimulus, is usually followed by reäction. Hunger ends, if not gratified, in gastritis; and a part to which cold has been applied, becomes irritated on the removal of the cold; unless the latter be extreme, or long-continued. Debility is sometimes a consequence of excitement; as in exhaustion from violent exercise, and real debility of the stomach, subsequent to gastritis. Excessive increase of the organic actions of any part, may debilitate its function; as we see in the diminished contractility of an inflamed muscle. Debility produced by abstraction of stimulus, must be removed by the cautious application of gentle stimuli. Debility of the stomach must be treated with easily digestible food, and gentle tonics; active stimulants will create gastritis. Debility of an organ from irritation of another, will demand the removal of the irritation. Muscular debility from gastro-enteritis, as in typhus fever, must be relieved by debilitants applied to the mucous membrane; and not by internal stimulants, which will exasperate the cause of the debility.

In concluding our observations on the present work, it would be ungrateful to neglect the author, but unnecessary to detain the reader with recommendations of a performance, the value of which is self-evident. M. Goupil has conducted his exposition in a manner scarcely susceptible of improvement; and strong indeed must be that scepticism, which can resist the appeal of conclusions logically drawn from undeniable premises.*

Both the doctrines and the practice, a faint sketch of which we have given, once appeared to us, as trivial as they can seem to any of our readers. But a full investigation has long since convinced us, that the doctrines contain fewer errors than those of any other system, while the practice, if any difference be allowed between rash violence and scientific prudence, is the most active ever pursued. Of this we have daily proofs. The idea, very prevalent among many who have not seen patients treated on the preceding principles, that

* We announce with pleasure, that Dr. J. C. Nott, of Columbia, S. C. has prepared, and will publish as soon as practicable, a translation of this valuable work.

it is too mild for acute diseases, is entirely erroneous; indeed, it is to these very cases that it is applied with the most rapid and beneficial effect. A friend once observed to us, that under the physiological treatment, common intermittent fevers would continue six weeks. Yet we have since known that physician to treat such cases with perfect success, in almost precisely the manner which he formerly considered as entirely inert; and this, too, under circumstances by no means propitious to the physiological system; as he had not the means of local bleeding, "the very head and front" of the physiological treatment of gastro-enteritis. Let others follow the liberal example here set before them, deciding the question by a full and fair trial.

It is much to be regretted, that throughout our country, the system of Broussais is constantly denounced by practitioners who have neither tried it themselves, nor seen it tried by others; nay, by many who are totally ignorant of its details. To such, we would apply an observation of an English writer on another subject, "we have laughed at it long enough; it is now time to learn it."

To such as have studied the works of Broussais and his pupils, the former is known as a philosopher of the most brilliant talents, improved by vast experience, and possessing a degree of tact inferior, perhaps, to that of no one of his cotemporaries. His name and his opinions should be respected, as those of a veteran philanthropist, who has, through a long series of years, laboured hard and incessantly for the benefit of mankind; and if there be still many who denounce him without reason, let them

> "Pray to the gods to intermit the plague
> That needs must light on this ingratitude."

It is still a pleasing reflection, that the cause which we have so weakly but earnestly pleaded, is gaining ground rapidly, and must inevitably prevail; while the declining years of Broussais will be made happy, by the certainty, that in the end, few benefactors of the human race will receive a greater tribute of gratitude than the author of *Physiological Medicine*.

E. D. FAUST

BIBLIOGRAPHICAL NOTICES.

XV. *An Eulogy on Dr. Godman, being an Introductory Lecture, delivered November 1, 1830.* By THOMAS SEWALL, M. D. Professor of Anatomy and Physiology in the Columbian College, D. C. Washington, 1830, pp. 24, 8vo.

It has been a subject of extreme regret to us, that we have not been able, long ere this, to present to our readers, a biographical sketch of our valued and lamented coadjutor, but it was the request of those who are most interested in the subject, and who alone can supply the materials for a history of his early life, that nothing should be published until these materials were furnished, and up to the present moment we have never been put in possession of them.

The collection and arrangement of the promised information, have indeed been so long delayed by various unfortunate circumstances, that we now almost despair of ever receiving it, and therefore take advantage of the eloquent and instructive eulogy of Professor Sewall, to present a brief notice of Dr. GODMAN, and for this purpose, shall borrow largely from the address in question.

Dr. John D. Godman was born at Annapolis in Maryland, and at a very early age was deprived of the fostering care of parents.

His father had lost the greater part of his estate before his death, and that which remained never came into the hands of his children. Young Godman, therefore, was early taught to rely on his own talents and industry. In this situation he was indented an apprentice to a printer in the city of Baltimore; but the occupation was not congenial to his taste, and after a few years, he left the business in disgust, and at the same time entered as a sailor on board the Flotilla, which was then, (the fall of 1813,) stationed in the Chesapeake Bay, and he was one of those who under Commodore Barney, so gallantly defended the heights of Bladensburg, and arrested for a while the advance of the British army upon Washington.

"At the close of the war, having arrived at the age of fifteen, he was permitted to pursue the inclinations of his own mind; and he immediately commenced the study of medicine. He first placed himself under the instruction of Dr. Lucket, of Lancaster, Pennsylvania, but soon removed to Baltimore, and entered the office of Dr. Davidge, at that time Professor of Anatomy in the University of Maryland.

"Here he pursued his studies with such diligence and zeal, as to furnish, even at that early period, strong indications of future eminence. So indefatigable was he in the acquisition of knowledge, that he left no opportunity of advancement unimproved, and notwithstanding the deficiencies of his preparatory education, he pressed forward with an energy and perseverance that enabled him not only to rival, but to surpass all his fellows.

"As an evidence of the distinguished attainments he had made, and of the confidence reposed in his abilities, he was called to the chair of Anatomy in the University, some time before he graduated, to supply the place of his preceptor, who was taken from the lectures in consequence of a fractured extremity. This situation he filled for several weeks with so much propriety—he lectured with such enthusiasm and eloquence, his illustrations were so clear and happy, as to gain universal applause; and at the time he was examined for his degree, the superiority of his mind, as well as the extent and accuracy of his knowledge were so apparent, that he was marked by the Professors of the

University as one destined at some future period, to confer high honour upon the profession.

"Soon after he graduated, he repaired to a small village in Anne-Arundel county, in his native state, and established himself as a practitioner of medicine. Here he entered on the active duties of the profession, with the same energy and diligence, which had distinguished him while a pupil, devoting all the hours he could spare to professional and other studies. It was at this time that he commenced the study of Natural History, a science in which he became so distinguished an adept, and for which he ever after evinced so strong a passion. But the place was too limited for the exercise of his powers; and not finding those advantages which he wished for the cultivation of his favourite pursuits, he removed to Baltimore. Here he could enjoy more ample opportunities for the study of Anatomy, which he considered as constituting the foundation of medical science.

"About this time he formed a connection by marriage; an event which contributed equally to his domestic happiness and literary advancement. Soon after his marriage he removed to Philadelphia, but had scarcely settled in that city, when he received a pressing invitation to accept the Professorship of Anatomy in the Medical College of Ohio, an institution then recently established. During his western tour he encountered difficulties which would have broken down a spirit less energetic than his own; but he bore up under his accumulated labours and privations, with unshaken firmness and steady perseverance. He however remained but one year, and returned to Philadelphia—and here commenced that career of research and discovery, which laid the foundation of his future eminence.

"More ambitious of fame, and more eager for the acquisition of knowledge, than for the accumulation of wealth, Dr. Godman on settling in Philadelphia, rather retired from the field of practice, that he might employ all his time, and exert all his powers in scientific pursuits. He thus found himself at once removed from the pitiful rivalries and jealousies of the profession, and placed in a situation in which he could enjoy the friendship, without alarming the fears of his brethren.

"His main object was to make himself a thorough anatomist, and to qualify himself for teaching that science. To this end he opened a room, for giving private demonstrations; and after a few winters, he drew around him a class of one hundred students. He now found himself occupying a field which furnished ample scope for the exertion of all his powers, as well as for the gratification of his highest ambition: and it was while engaged in the discharge of the duties of this situation, that the foundation was laid of that fatal disease of which he died, for so eager was he to acquire knowledge himself, as well as to impart it to those around him, that he would not only expose himself to the foul atmosphere of the dissecting room during the whole day, but often subject himself to the severest toil for a considerable part of the night; and the moments which were spared from his anatomical labours, instead of being spent in relaxation, or in exercise in the open air, for the benefit of his health, were employed in composing papers for the medical journals, in copying the results of his anatomical and physiological investigations, in preparing parts of his natural history; or in carrying on other literary and scientific studies. It is impossible that a constitution naturally delicate, could long remain unimpaired under such strenuous, and unremitting exertion.

"After Dr. Godman had prosecuted his anatomical studies in Philadelphia for four or five years, his reputation as an anatomist became so generally known, his fame so widely extended, that the eyes of the profession were directed to him from every part of the country; and in 1826, he was called to fill the chair of Anatomy, in Rutgers Medical College, established in the City of New York. There could scarcely have been a stronger testimony of the high estimation in which he was held, or of his reputation as a teacher of Anatomy, than his appointment to this station; an institution around which several of

the most eminent professors in the country had already rallied; and which was called into existence under circumstances of rivalry that demanded the highest qualifications in its instructors. This situation, as that of every other in which he had been placed, he sustained with a popularity almost unparalleled. He never exhibited in public, but he drew around him an admiring audience, who hung with delight upon his lips. But the duties of the chair, together with his other scientific pursuits, were too arduous, and the climate too rigorous for a constitution already subdued by labour and broken by disease; and before he had completed his second course of lectures, he was compelled to retire from the school, and seek a residence in a milder climate. He repaired with his family to one of the West India Islands, and remained till the approach of summer, when he returned, and settled in Germantown. In this place, and in Philadelphia, he spent the residue of his life.

"From the time Dr. Godman left New York, his disease advanced with so steady a pace as to leave but little hope, either to himself or his friends, of his final recovery. He however continued almost to the last weeks of his life, to toil in his literary and scientific employments; and this too, with all that ardour and enthusiasm, which distinguished the more youthful part of his career.

"But for what purpose did he thus toil? Not for the acquisition of wealth, for this he could not enjoy; not for posthumous fame, for this he did not desire. It was, as he affectingly tells us, for the more noble purpose, the support of his family, and the good of his fellow creatures.

"The productions of Dr. Godman's pen, and the fruits of his labour, are too numerous to be specified. Among them will be found, 'Anatomical Investigations, comprising a description of various Fasciæ of the Human Body;' 'An account of some Irregularities of Structure and Morbid Anatomy;' 'Contributions to Physiological and Pathological Anatomy;' 'A System of Natural History of American Quadrupeds;' 'An edition of Bell's Anatomy, with notes;' 'Rambles of a Naturalist;' all the articles on Natural History, in the American Encyclopædia, to the letter D. besides numerous papers which have appeared in the periodical journals of the day. At one time he was the principal editor of the "Philadelphia Journal of the Medical and Physical Sciences." He published some time before his death, a volume of Addresses which he had delivered on different public occasions.

"Most of these admired productions have been before the public for a considerable time; have been received with high approbation, and several of them favourably noticed, and even republished in foreign countries.

"Those of his works which are purely medical, have been read with great interest by the profession, and contain much new and valuable information. His investigations of the Fasciæ of the Human Body, and his description of this intricate part of the animal structure, while they disclose some important discoveries, exhibit the whole subject in a manner so plain and simple, as to divest it of its obscurity, and bring it within the comprehension of the youngest student—a subject which, till his researches were made known, was but little understood even by the best anatomists. His contributions also to Physiological and Pathological Anatomy, though but the scattered fragments of a great work which he had designed, contain discoveries and observations which will be read with the deepest interest by the enquirer after truth. Of his works not immediately connected with the profession, his Natural History of American Quadrupeds is the most elaborate, and is published in three volumes.

"This production will long remain a splendid monument of the genius and industry of its author, and be regarded as a model of composition for works of this description. It should have a place upon the table of every family, and be put into the hands of all the youths of our country. Among the latest productions of his pen, are his essays entitled Rambles of a Naturalist, which were written in the intervals of extreme pain and debility. For strong, lively, and accurate description, they have scarcely been surpassed. He always came to his subject as an investigator of facts,—one who had nothing to learn, but every

thing to discover; and, like the celebrated Buffon, never availed himself of the labour of others, till he had exhausted his own resources. It was this spirit which enabled him to disclose so many new truths, and which gave to all his works the stamp of originality. The value which he placed on original observation, as well as the zeal with which he sought information from this source, may be learned from a single incident, 'that, in investigating the habits of the shrew mole, he walked many hundred miles.'

"The volume of his Public Addresses have been greatly admired for the pure and elevated sentiments they contain as well as for their high-wrought eloquence.

"But his published works constitute but a part of the labours of his pen, and many things which he sent forth, were only fragments of a great system, or the commencement of future researches. He had formed vast plans for prosecuting new investigations in various departments of science, which he did not live to accomplish.

"Though he wrote with great rapidity, and sometimes without much care, yet all his works bear the impress of a mind naturally vigorous, bold and original, and much disposed to draw from its own resources; and most of them are written in a style of great elegance and beauty.

"Dr. Godman's intellectual character was very extraordinary. He possessed naturally, all the characteristic features of a mind of the highest order. Naturally bold, ardent and enterprising, he never stopped to calculate consequences so far as they regarded himself; but rushed forward with impetuosity to perform whatever he undertook. Great and lofty intellectual purposes seemed to be the natural element in which he lived. His perception was quick and accurate, his memory exceedingly retentive, and he possessed an uncommon facility of abstracting his attention from surrounding objects, and of concentrating all his powers upon the subject of his pursuit. It was this latter trait of mind, no doubt, which gave such effect to all his efforts: while he was indebted to the power of his memory for the remarkable facility he possessed of acquiring languages: for although his early education had been exceedingly limited, he had acquired such a knowledge of the Latin, Greek, French, German, Danish, Spanish and Italian languages, as to read and translate them with fluency, and to write several of them with elegance. His quick and discriminating powers of observation naturally inclined him to notice the habits and economy of animals, and gave him his taste for the study of Natural History.

"But the most striking character of his mind was undoubtedly philosophical imagination. It was this trait, which conferred upon him such powers of description and illustration, and imparted freshness and splendour to every thing he touched. All his conceptions were strong, clear, and original, and he possessed the power of holding before him whatever object engaged his attention, till all its parts and relations were brought to view. By those who have listened to his extemporaneous discussions, it is said, that while he was speaking, a thousand images seemed to cluster around the subject, and that he had just time to select such as imparted beauty, or furnished the happiest illustration of the object he wished to explain. Yet, while he possessed all this richness and fertility of mind, taste and judgment ever controlled its operations.

"He was a laborious and untiring student, and possessed in an high degree the requisites of all true intellectual greatness—the habit of patient investigation, long-continued attention, and a singular love of labour. 'How often,' says one, (to whom he unbosomed the secrets of his heart,) 'have I entreated him, while poring half the night over his books and papers, which were to yield him nothing but empty honour—how often have I begged him to consider his health; but his ambition and thirst for knowledge were such, that having commenced an investigation, or a language, no difficulty could stop him; and what he had no time to accomplish in the day, he would do at night, instead of enjoying that rest of which he stood in so much need.'

"It has been truly and happily said by one who knew him intimately, that his eagerness in the pursuit of knowledge, seemed like the impulse of gnawing

hunger, and an unquenchable thirst; which neither adversity nor disease could allay. Variety of occupations was the only relaxation which he sought for or desired.

"He composed with rapidity, but not without a high degree of intellectual excitement, and the most abstracted attention. Under such an influence, some of his best essays were sent to the press as they first came from his pen, without the smallest correction.

"Considering the defects of his early education, his acquisitions for his years were astonishingly great. Indeed, there were but few subjects of general literature with which he was not, more or less, acquainted.

"But it was his accurate knowledge of Anatomy and Physiology, and his uncommon power of teaching these branches of medicine, which give him his strongest claims to our regard as a man of science; and had his life and health been prolonged, so that he could have directed the whole energy of his mind to the cultivation of this department of our profession, we have reason to believe that he would have laid open new sources of knowledge, discovered new laws, and reduced to order those scattered materials already known; and that the whole study would thus have been simplified, and enriched by his labours.

"His method of teaching Anatomy was entirely analytical; and in this respect, peculiar, that he performed all his dissections in the presence of the class, demonstrating the different parts of the animal structure in succession, as they were unfolded by the knife. But this method, however well suited to a private class in the dissecting room, causes too much confusion and delay to be practiced with success, while lecturing, by one less dexterous and skilful than its author himself.

"Dr. Godman, in his manners, was plain, simple, and unostentatious; yet he possessed that warmth and affability, which rendered him accessible to all, and the delight of the social circle. His feelings in every thing were ardent and decided. He was devotedly attached to his friends—towards his enemies he was impatient, and felt keenly their revilings. In his conversation, he was fluent, and though unstudied, was often brilliant, and always full of point and power.

"He was particularly distinguished for simplicity, and directness in the uttering of his thoughts, which always indicated to those he addressed the absence of selfishness and concealment. No enigmatical expressions, no innuendoes, were ever heard from his lips. Dark and distant insinuations were his utter abhorrence. In whatever he said, and in whatever he did, he put forth his whole soul. He was always cheerful, and apparently happy, even amidst the deepest adversity, and the keenest suffering.

"When we consider the circumstances under which Dr. Godman made his way to the profession, and afterwards prosecuted his studies, the multiplicity of objects which he pursued, and the light he shed on every department of science which he touched—when we consider the power of his intellect, the versatility of his genius, and the intensity of his application, we cannot but regard him as altogether an extraordinary personage, such an one as has seldom been permitted to dwell among men, to share their sympathies, and mingle in their elevated pursuits."

The following just and elegant tribute from the pen of a distinguished scholar, who knew him well, may with propriety be quoted here.

"The tributes, says Mr. Walsh, 'which have been paid in the newspapers, to the late Dr. Godman, were especially due to the memory of a man, so variously gifted by nature, and so nobly distinguished by industry and zeal in the acquisition and advancement of science. He did not enjoy early opportunities of self-improvement, but he cultivated his talents, as he approached manhood, with a degree of ardour and success, which supplied all deficiencies; and he finally became one of the most accomplished general scholars, and linguists, acute and

erudite naturalists, ready, pleasing, and instructive lecturers and writers, of his country and era. The principal subject of his study was Anatomy in its main branches, in which he excelled in every respect. His attention was much directed also to Physiology, Pathology, and Natural History, with an aptitude and efficiency abundantly proved by the merits of his published works, which we need not enumerate.

"We do not now recollect to have known any individual who inspired us with more respect for his intellect and heart, than Dr. Godman; to whom knowledge and discovery appeared more abstractly precious; whose eye shed more of the lustre of generous and enlightened enthusiasm; whose heart remained more vivid and sympathetic, amid professional labour and responsibility, always extremely severe and urgent. Considering the decline of his health, for a long period, and the pressure of adverse circumstances, which he too frequently experienced, he performed prodigies as a student, an author, and a teacher;—he prosecuted extensive and diversified researches; composed superior disquisitions and reviews, and large and valuable volumes; and in the great number of topics which he handled simultaneously, or in immediate succession, he touched none without doing himself credit, and producing some new developement of light, or happy forms of expression.

"He lingered for years under consumption of the lungs; understood fully the incurableness of his melancholy state; spoke and acted with an unfeigned and beautiful resignation; toiled at his desk to the last day of his thirty-two years, still glowing with the love of science, and the domestic affections. The reputation, the writings, and the family of this victim of the most exalted ambition and refined propensities, should be greatly and widely cherished."

XVI. *Dublin Medical Transactions, a series of papers by members of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland.* New series. Vol. I. *Pt. I. Dublin,* 1830. pp. 383, 8vo. Plates III.

We hail with pleasure the appearance of this volume which fully sustains the high character acquired by the Society by its previous publications, and proves that the practitioners of Dublin are not behind those of the sister kingdoms in the zeal with which they labour for the advancement of medical science.

The present volume contains nineteen papers. The first is an account of two cases of recovery from laceration of the uterus and vagina, by Robert Collins, M. D. It was asserted by Dr. Hunter, and the opinion was subsequently strongly enforced by Dr. Denman, that rupture of the uterus was so necessarily fatal an accident, that any attempt to relieve the woman was useless and even cruel. In Vol. II. p. 222, Vol. III. p. 223, Vol. V. p. 531, and Vol. VI. p. 351, of this Journal, no less than eight cases successfully treated will be found, showing most conclusively the erroneous and mischievous character of such an opinion. The paper of Dr. Collins is principally valuable, as affording further evidence of the impropriety of practitioners abandoning such cases to their fate. In the first case there was an extensive laceration of the vagina and cervix uteri, caused by a midwife mistaking the hand for the foot, and attempting to extract the child when the shoulder presented. In the second case an extensive laceration occurred at the junction of the vagina and cervix uteri, through which the intestines protruded. The cause of the rupture does not very clearly appear. Both patients recovered. We may mention here that Dr. Henschel, of Breslaw, has recorded in a recent number of *Sie-*

bold's Journal für Geburtshuelfe, (Vol. VIII.) a case of prolapsus and rupture of the uterus during delivery, which terminated favourably. The rupture was at the upper part of the cervix uteri, was very small, only about the extent of half an inch.

The next article contains an excellent account of two cases of pulmonary apoplexy, illustrative of the value of mediate auscultation, by John C. Ferguson, A. M., M. B. The first case was that of a robust man, aged thirty-six, who had been for some months labouring under cough, and who, whilst putting on his shoes, complained of loss of vision, seemed to faint, and died without a struggle. The patient had not expectorated any blood for fourteen hours before death, nor in the agony was there any escape of blood from the mouth or nares, which might lead to a suspicion of the real seat of disorganization. The general symptoms did not lead to a suspicion of pulmonary apoplexy, and the patient was not treated for that disease. Had a stethoscopic examination been made, the disease would have been recognised, and without such an examination, an accurate diagnosis in diseases of the lungs is often impracticable. On examination forty-eight hours after death, the superior lobe of the left lung was completely injected with blood, so that the structure of that organ seemed absolutely broken up by the excessive effusion of blood into it. The apoplectic mass in this case was, however, soft and flabby, and not resembling the firmness of hepatized lung as described by Laennec. There was a laceration of the pleura in the superior and posterior part of the affected lobe, opening upon the point where the sanguineous effusion into the substance of the lung seemed most intense, and about three quarts of blood was effused into the pleural sac.

The second case occurred in a female, aged fifty-six, who for two months was affected with cough and constipation. When Dr. Ferguson visited her on the 10th of November, she was labouring under a profuse hæmorrhage, which had commenced the night before. Her pulse was 110, weak and small, countenance pale and anxious. On percussion, the whole chest sounded well except the left subclavian region, which was dull. *Auscultation.* Respiratory murmur in the greater part of the superior lobe of the left lung either absent or very feeble: in points, a well marked *rale crepitant*, more particularly around the part where respiration is absent: puerile respiration in the rest of the same lung, with heavy mucous rale about the leading bronchi. In the right, in spots, the *rale sonore* was heard. From this examination Dr. F. could not hesitate to decide at once upon the existence of pulmonary apoplexy, and despite the age and considerable debility of the poor woman, he took sixteen ounces of blood from her arm which induced faintness. Dr. F. was encouraged to bleed by observing, that the strength of the heart's action, as examined by the stethoscope, was disproportionate to the smallness and weakness of the pulse—an observation originally made by Laennec, and which should be borne in mind in deciding on venesection in all cases of hæmorrhage. The rest of the treatment consisted in the administration of purgatives, cough mixture with tartar emetic, and the strictest abstinence. The patient speedily recovered.

The following observations of Dr. F. on the subject of blood-letting the most powerful means we possess for the cure of this disease, are worth quoting.

"In few diseases," says Dr. F. "where it is beneficial, is its employment

more markedly contra-indicated in the great majority of cases by general symptoms. Of course we meet with exceptions to this, where the general plethora, &c. demand bleeding at the hands of any man, however ignorant he may be of the real disorganization; but on the contrary, for one such case, how many does every practical man meet, where almost every symptom would seem to contra-indicate the most effectual mean of relief? It is too often argued, that by opening a vein we merely add to the existing evil; that we are still abstracting from that source of strength which has been already so seemingly exhausted, and which may be hereafter so much wanted; and the practice founded on such reasoning, I fear, too often consists in the exhibition of tonic and astringent medicines. This is a most fatal error. A copious venesection seldom indeed amounts to nearly the quantity of blood, which a patient, labouring under pulmonary apoplexy, will expectorate in a few minutes, and this latter is infinitely more debilitating than the former. Besides, the loss of blood in one way, venesection, tends to diminish the existing evil, and promote its resolution, while the other, on the contrary, only adds to the disease, and increases the danger. No doubt cases will present themselves to us, where, from their being of some standing, the patient may be so spent by the frequency and extent of the hæmoptysis, that to have recourse to general blood-letting might be a hazardous experiment: and I conceive it no easy matter to determine with justness what constitutes this condition. Decidedly, an account of his own feelings of debility given by our patient is not sufficient, and we all know how very deceitful an index the pulse is. When we hesitate as to the propriety or impropriety of blood-letting, as I have before stated, I believe our very best guide, indeed the only one in which any confidence is to be placed, to be the comparative strength or weakness of the heart's action, as examined by the cylinder. If it be strong, firm, and regular, no state of pulse nor seeming prostration of strength of our patient should deter us from using the lancet; but if the contrary, we should then prefer having recourse to other means, which I shall not now dwell upon."

John Crampton, M. D. furnishes the next three articles. The first is a case of melanosis; the second a case of perforation of the stomach, with the escape of a lumbricus into the cavity of the abdomen; and the third, an account of an anomalous state of the heart.

The case of melanosis occurred in a weaver, thirty-four years of age, and was considered during life, as an instance of enlarged and tuberculated liver. There was ascites to great extent, and the disease was of six years standing. On examination after death the pleuræ were found studded with melanotic tumours, about the size of a pea, and which, when cut into, resembled coagulated blood. The liver was immensely enlarged, weighing nineteen pounds, and measuring three feet eight inches in circumference. On its surface it was thickly studded with round black tubercles, varying in size. When cut into, these tubercles presented a soft pulpy matter, easily broken down, and resembling Indian ink in colour. The interior of the liver was also studded with these black tubercles, so that when cut the surface resembled a slice of plum pudding.

This, like most other cases of the same description, was not attended by any symptoms which would form a diagnosis between it and other changes of structure in the lungs, liver, and other important organs.

The instance of perforation of the stomach occurred in a woman aged fifty, admitted into Hardwicke hospital. She had obstinate constipation, vomiting, intense pain in the epigastrium, with inflation and tenderness of some day's

standing, which was followed by diarrhœa: she died a fortnight after admission much emaciated. On examination, there were found three quarts of puriform fluid in the abdominal cavity, the whole peritoneum and viscera covered with lymph, and the inflammation had extended to the thoracic organs. A large lumbricus was found between the liver and stomach. A round perforation was discovered about the middle of the lesser curvature of the stomach. Externally its margin was smooth and defined, and lined by a membrane which appeared to be a continuation of the mucous membrane of the stomach; internally its margin was also defined, and surrounded by a hard elevated edge, irregular, somewhat triangular, inclosing an aperture into which the worm could be inserted. None of the contents of the stomach appear to have escaped into the abdominal cavity, probably from the liver being pressed against that part of the stomach in which the aperture was situated.

The chief interest in the case of anomalous state of the heart is that life should be maintained ten years with so imperfect an organ, and one apparently so inadequate to the performance of its functions. The subject was a boy, aged ten, who died dropsical, accompanied with symptoms of disorder of the heart, intimated by palpitation, a pale, livid colour, and a very distressed state of respiration. The heart was found in its natural position, but the upper part of the right ventricle being pushed out so as to present somewhat of a sugar-loaf shape. The pulmonary artery was considerably contracted at its entrance into the heart, and destitute of valves. A finger introduced into the aorta entered freely into both ventricles. The left ventricle was natural, with the exception of a slight increase in the thickness of its parietes. The upper part of the septum between the ventricles was deficient, consequently the two ventricles communicated. The right ventricle was dilated, opposite the deficiency in the septum, into a pouch. The pulmonary artery communicated with a separate cavity, bounded by distinct walls, which, however, was attached to the right ventricle, and communicated with it by means of an opening capable of admitting the little finger, formed under the columnæ carneæ of the ventricle The lining membrane of this cavity, as well as of the pulmonary artery, was spotted with lymph in several places, which, in the artery, assumed the appearance of warty excrescences. The two auricles were natural, except that the foramen ovale was open. The pulmonary artery was perfectly destitute of valves; at the usual situation of the valves it was a little puckered and contracted, above which the artery was considerably dilated, and it was in this dilated part that the warty excrescences were situated.

The observations on the use of instruments, in cases of difficult and protracted labour, by John Beatty, M. D. are extremely sensible and judicious, but contain nothing new to us on this side of the Atlantic. They are essentially the views promulgated by our learned collaborator, Professor Dewees, who by the bye is quoted by the author; we will merely mention, therefore, that the object of the paper is to urge the utility of the forceps in certain cases, in which the perforator and crotchet has been too frequently resorted to.

The memoir by John C. Ferguson, M. B. on auscultation as the only unequivocal evidence of pregnancy, is extremely interesting and valuable. It is known to every one how important it sometimes is to determine whether a female be pregnant or not, and how difficult and indeed impossible it is in some

cases, to determine this during the early periods of utero-gestation. An Italian physician has lately announced that pregnancy may always be known by the occurrence of a peculiar pain in the organ of amativeness. In our Periscope will be found a more particular notice of this symptom, the existence of which still requires confirmation. The signs of pregnancy afforded by the stethoscope, and which were first observed, as most of our readers know, by a talented young Frenchman, M. Kergaradec, consist in the bruit placentaire and the pulsations of the fœtal heart. These are not usually observed before the fifth month, "but after that period, an accurate observer," Mr. Ferguson says, will seldom fail to detect either, and in most cases both.

"The placentary noise," says Dr. F., "should be sought for in either iliac region, where, at least according to my experience, it will be most generally found. Yet have I detected it in almost every part of the abdomen; nor does it ever vary from the place where first heard.

"The only error that I am aware of, into which we are liable to fall in making this examination, is, where the pulsations of the iliac arteries are accompanied with a *bruit de soufflet*. This, of course, is well calculated to deceive; but when the artery is the source of the *bruit*, we shall hear it, I am inclined to think, equally on both sides, at least I never met a case where this did not hold. Besides, it will not be heard save in the groin, whereas the noise of the placenta is heard over a space of some extent, perhaps three or four inches square.

"The fœtal heart I have heard in almost every region of the abdomen. Although it and the placenta are sometimes heard in the same side, and I have even found them in the same spot, yet have I observed that they were to be met with in the majority of cases, at opposite sides, generally in the iliac region; so that this is the situation which I always examine first, and have rarely occasion to shift the instrument to any extent before either one sound or the other is discovered. The fœtal heart, however, unlike the placenta, is not always heard in the same place in the same individual; that is, it may be found to-day in one point, and in another to-morrow; though I have never found it to vary much from the point where first heard. Its double beat is well-marked, and the frequency of its pulsations is, I believe, always much greater, often double that of the mother's."

Several very interesting and striking cases are related by Mr. F. in which he was enabled to detect pregnancy by auscultation, where the female stoutly denied being pregnant, and where no other evidence than that afforded by the stethoscope could be obtained. We cannot afford space to insert these, but we regret this the less, as the whole memoir will be found in the volume of Select Medico-Chirurgical Transactions, which will be shortly published by Messrs. Carey and Hart.

The two succeeding articles are by Dr. Robert Law. One is on putrefactive disorganization of the lungs, and the other on hæmatemesis dependant upon disease of the liver. In the former, the author endeavours to distinguish between gangrene and that diseased condition of the lungs, to which modern pathologists have applied the designation of gangrene, a degree of refinement, apparently of [illegible] importance. The essential character of the disease, Dr. L. considers to consist in slough and decomposition of the proper pulmonary tissue; four well-characterized cases of the disease are given; one or two of which we shall insert in our Periscope.

The diseased condition of the liver productive of hæmatemesis, consists, according to Dr. Law,

"In an entire change of the proper substance of the organ, into a dense fibro-cellular tissue, forming a kind of pulp or parenchyma, in which the roundish bodies, (which, projecting on the surface, give the organ its irregular appearance,) are imbedded, its specific weight is greater than natural, while its actual size is less, and, so far from passing the margin of the ribs, it seems to have r[illegible]led within its ordinary bounds, showing how fallible a criterion of the health of the organ is either its size or its descent below the ribs; its form is altered, it becomes more round; its anterior margin more obtuse; its division into lobes less defined; its peritoneal covering thicker and more opaque than natural; its section exhibits no trace of blood-vessels, which we may presume to be either compressed or obliterated by the altered structure. Hence the impediment to the vena portæ pouring its blood into its ordinary channels, and the influence of the obstruction reverts upon all the branches which concur to form this vein, and thus we do satisfactorily account for the hæmorrhage."

This pathological condition of the liver, is most frequently met with in persons who have indulged freely in the use of ardent spirits. Dr. Law inquires whether, as the direct tendency of such indulgence is to produce a chronic inflammation of the gastro-intestinal mucous membrane, it would be pushing conjecture too far to suppose the affection of the liver to be owing to the extension of inflammation, from the intestine along the ductus communis choledochus. Such an opinion appears to us to rest upon something more solid than mere conjecture, and certainly has no novelty.

Two cases of the disease are related, one of which will be found in our Periscope.

The case of cancer of the uterus and adjacent parts, by JOHN BEATTY, M. D. does not strike us as possessing any remarkable interest. There is some interest, however, in the following remark. Dr. Beatty says, that in almost every instance in which he has been consulted for cancer of the uterus, the disease has arisen in persons in whom an early interruption of connubial intercourse had taken place, and that acting in reference to this observation, he has succeeded in checking the disease in one case, by recommending a restoration of conjugal rights.

We pass over an account of "a singular case of extra uterine pregnancy, by ROBERT COLLINS, M. D.;" and the "case of hydrophobia, by J. H. PURDON, Jun. M. D." as of no practical value.

The ovarian disease of a remarkable character, an account of which, by W. F. MONTGOMERY, A. M., M. B. follows, consisted of a tumour

"Composed of fine membranes, dividing it into innumerable cells, which, with their fluid and transparent contents, resembled, at first sight, hydatids; the membranous septa dividing the cells were supplied with blood-vessels of a considerable size, running along their edges, so that the whole tumour presented a c[illegible]red colour. At its upper and left part, there was a deep cleft or fissure, into which the open hand might be passed without any force, and when carried downwards, and towards the right side, [illegible] a round sac equal in size, and much resembling a [illegible] this was the right ovary which lay just under, and was filled with the same structure as the part of the tumour first brought into view. In fact, it seemed as if the peculiar structure had at first grown in the ovary, which thereby became greatly enlarged, until at length the coat of the ovary had given way, and out of the fissure so formed, the morbid growth continued to enlarge, turning over the edges of the fissure,

and covering the front and sides of the ovary in which *it had formerly been contained*, so that the tumour was in a great measure turned inside out."

The tumour was twelve inches long and nine broad.

A fact of practical importance, and one which, though long since noticed by Morgagni and Van Swieten, and since urged by the Physiological School, by Dr. Abercrombie, &c. is, that in this case, at least two pints of pus were found in the abdomen, evincing a very *considerable inflammatory action* to have taken place, *without its existence being indicated, either by pain or the character of the pulse.*

We have given in our sixth volume, page 224, a fatal case of scirrhus of the pylorus and ulceration of the stomach, in which no pain was at any time experienced even on pressure, and many other cases to the same purport might be adduced, were it [illegible]sary, to show that abdominal inflammation may exist even in its destructi[illegible]rm, without its existence being indicated either by pain or the state of the pulse.

The "case of anomalous labour," by Dr. Thomas Ferguson, which follows, is curious and somewhat interesting. Dr. F. was sent for to deliver a woman who had been in labour for eighteen hours. On his arrival he found the feet of a child pr[illegible]ling almost without the os externum; the toes pointing to the perinæum, the o[illegible]uteri fully dilated, and the soft parts in an advantageous state to facilitate deli[illegible]

"On further examin[illegible]ion," says Dr. F. "I discovered that there were twins, and to my great embarrassment ascertained that the head of a second child had entered the pelvis, while by passing my finger along the spine and neck of the child then partly delivered, I could distinctly trace its head still remaining above the brim of the pelvis. My first efforts were to endeavour to push up the head of the second child th[illegible] descending, so as to allow the other head, that of the first child, to occupy [illegible] proper place. But all my exertions proved ineffectual, owing to the pow[illegible]ful contractions of the uterus, which had been much facilitated in pressing the second head into the pelvis by the removal of the obstruction, which it before met in the arms of the first child; indeed, it would appear that this obstruction had retarded the descent of the second head at a much earlier period of the labour."

Finding no possibility of extracting the little sufferer from his then perilous situation, Dr. F. resolved to have recourse to the perforator, but not having the instrument, considerable delay was occasioned, during which time nature accomplished the delivery. The second child, (a female,) in which the head presented, was born alive; the first, in which the feet had presented, and which was a male child, was born dead. The process of parturition was as follows.—

"The descent of the footling w[illegible] in the most favourable position for delivery, the toes pointing to the sacrum, and must have been progressing in that regular course, until interrupted by the intrusion of the second [illegible] into the pelvis, so soon as the arms and shoulders of the first had fairly c[illegible]ed its brim. *Here* then the se[illegible] head must have made its way into t[illegible]lvis, its *right* ear to the sacrum, [illegible] the pubes. At this time the [illegible] of the first child occupied the left [illegible]sterior to the [illegible] of the second, the head resting on the [illegible] pelvis, ready to follow the descent of its companion; its *left* ear turned t[illegible]pubes, the *right* to the sacrum. [illegible] the labour process, the head of the ma[illegible]ld became imbedded in the hollow of the neck of the female, its *left* ear occ[illegible]ying a situation nearly approaching the right

car of the female, but a litter higher up. The frontal bone of the female must have rested on the clavicle and shoulder of the male child, as was quite evident from the effects of the uterine action; for in proportion as the head of the female advanced, so did the arms and shoulders of the male clear the os externum.

"The face of the female when entirely protruded was turned upwards, the mother then lying on the left side. At this time the male head remained within the vagina, and it was only during the violent pains, which protruded the shoulders of the female, that the head of the male fell out on its face in the bed. The delivery was soon completed by the natural expulsion of the secundines."

The next article is on the motions and sounds of the heart, and is by Dr. J. Corrigan, M. D. The views of the author in this paper have given rise to much controversy, and we think that they have been entirely controverted by a writer in some of the recent numbers of the London Medical Gazette. As the subject is one of interest, and the discussion appears to have elicited some interesting facts, we shall probably devote a distinct article to the subject.

The case of ossification of the mitral and aortic valves, with induration of the tricuspid, hypertrophy and dilation of both auricles, by Patrick Clinton, M. D. is an interesting contribution to the pathology of the central organ of the circulation, and we shall insert it in our Periscope.

The succeeding article is on polypi of the heart, as an idiopathic affection, and as a cause of death, by William Harty, M. D. The object of this paper is to prove that idiopathic polypus of the heart really sometimes occurs, and that its existence may be ascertained during life by certain pathognomonic symptoms, contrary to the opinion of Allan Burns, and several other eminent pathologists.

Two cases are related; in the first, a girl of fourteen years of age,

"A distinct polypus of a whitish colour, unconnected with any coagulum, nearly filled the right ventricle and auricle—its branches extending into the great vessels, one branch being more than eight inches in length; the whole polypus adhered *so slightly*, as to be readily drawn out by the fingers; but a thick membranous substance of the same colour adhered with much firmness to the *external* side of the ventricle, penetrating into its interstices, and by means of both membrane and polypus, the valves were bound down, and must have been altogether impeded in their action—both auricle and ventricle were of a vivid colour, and of an inflammatory aspect. The left ventricle and aorta, however, presented a far more singular phenomenon. The ventricle was divided into two nearly equal cavities, by an adventitious whitish membrane, firmly adhering to the internal apex, and to the sides of the ventricle in a line nearly parallel to the septum, and terminating, as it approached the aorta, in a rounded organized polypus, tapering to a point, and entering above an inch into the aorta, which communicated very obliquely with the ventricle—the two cavities into which the ventricle was thus divided, communicated with each other very partially, where the membrane terminated in the rounded polypous concretion. The side of the membrane towards the left auricle was uneven; towards the aorta smooth. That auricle had the same inflammatory appearance as the right, and its valves were impeded by membranous layers, as those of the aorta were by the polypus—three of the carneæ columnæ were much enlarged· one of them being more than twice the size of a goose quill."

In the second case, that of a boy aged [illegible] ventricle and auricle contained

"A large and singular polypus, unconnected with any coagulum, and adhering firmly in some parts, and more loosely in others. In the auricle, (pro-

perly so called,) it adhered firmly throughout, maintaining a perfect union therewith by a number of lateral projections, and thence descending into the ventricle by a long and narrow neck, it formed a flat and firm adhesion to the side of the ventricle, throwing out at the same time a band, whereby it was connected to the polypous concretion which loosely occupied the apex and body of the ventricle, and extended thence into the aorta. The body of the auricular polypus branched largely into the pulmonary veins, and in its thickest portion contained a distinct, dense, and compact clot of blood, enveloped therein."

The symptoms in both patients, were palpitation, hurried respiration, pain about the region of the heart, epigastric tenderness, quick and strong pulse; with cough and temporary difficulty of lying on the left side. The symptom, however, which seemed peculiarly to characterize the disease, and which Dr. H. considers as the great diagnostic sign of polypus in the heart, or at least of its left ventricle, is a "singular thrilling, whizzing sensation, which every artery in the [illegible], as well as the heart," imparts to the touch.

The eighteenth article is the "Medical Report of the House of Recovery and Fever Hospital, Cork-street, Dublin, for the year 1829, by John O'Brien, M. D." In this institution, within the last 26 years, 81,418 patients have been admitted, of whom 5,085 died. Notwithstanding the almost unparalleled opportunities which have thus been afforded for pathological research, our readers will not be surprised to learn, that the report throws no new light on the nature of fever, when we inform them, that by a most extraordinary, we might almost say criminal, regulation, dissections are prohibited in the hospital—a regulation, which by preventing the medical officers from improving their knowledge of the nature and treatment of fever, and thus lessening its mortality, contravenes the very objects for which the hospital was instituted—the cure of that disease—and deprives the world at large of the advantages which flow from all improvements in the healing art. The report of Dr. O'B. is not, however, devoid of interest; but we regret to find him urging arguments against the utility of post mortem examinations, as throwing any light upon fever—and attacking mediate auscultation as a means of diagnosis. Such attacks always recoil upon the authors. The profession at the present day, are not to be blinded to the value of dissections or of the stethoscope; and when a writer underrates them, it leads to the suspicion that he is unwilling to assume the labour of the former, or lacks the industry requisite to learn the use of the latter, and desires that others should not be better informed than himself. Far be it from us to insinuate, that such a suspicion would be just, as regards Dr. O'B. but his remarks on these two subjects are at least unworthy an enlightened physician.

The last article is a description of a very remarkable malformation in a fœtus, by Dr. W. F. Montgomery. The most striking deviation from the natural structure, consisted in nearly all the abdominal viscera and the intestinal canal being external to the integuments of the abdomen.

XVII. *Thérapeutique de la Phthisie Pulmonaire, suivie de Notes—1o. Sur la Méthode de Dzondi, et* [illegible] *Syphilis et générale; 2o. Sur le traitment du Typhus.* Par A. [illegible] Tanchel. Paris, 1830. 8vo. pp. 107.

The author of the dissertation upon consumption lays no claim to the discovery of a specific or nostrum, nor does he vaunt his liverwort or pulmel, or

other deceitful lure. "Is it," says he, "that a new specific has been at last found for this disease, or the secrets of its cure discovered? Not that I know or believe. With the exception of those vended in bottles, I am acquainted with but one other secret in medicine, namely, the skill and tact of the physician."

Not satisfied with any of the attempts made by Broussais, Andral, and others to explain the formation of tubercles, he chooses to be silent upon the subject and confines himself mainly to the question of the curability or incurability of phthisis pulmonalis. The curability he maintains under the following conditions. First, when the progress of disorganization is arrested, before the pulmonary organ has become so far destroyed as to be incapable of performing its functions: Secondly, the existence in the system of a degree of organism capable of supplying a certain amount of energy or of vital reaction: Thirdly, a medical treatment specially adapted to each individual, [illegible]ufficient energy to arrest the progress of disorganization in the pulmonary organ, together with the general consumptive tendency prevailing in the system. The success of this treatment depends upon the tact of the physician, since if employed without method or skill, it will most probably prove unsuccessful.

The main therapeutic agents which our author depends upon, are the hydrocyanic acid, used in the manner directed by Magendie, and especially the digitalis purpurea and aconitum napellus, together with a combination of this last with the sulphuret of lime. One or more of these remedies are to be employed with those necessary precautions and attentions to minute details so strenuously insisted on by the venerable Hoffman. Without such attentions he makes no more account of these than of other agents that have been recommended in the same disease.

The authority of our author in favour of the hydrocyanic acid is entitled to no great weight, however, inasmuch as he cites but a single case wherein its use was attended with salutary effects. He prefers the digitalis as much more manageable, and thinks that the prussic acid cannot be employed too cautiously, seeing that the indications of its actions are so very obscure. Of the three modes of administering digitalis, namely, in powder, tincture, and infusion, he thinks the last much the most energetic, after which he rates the tincture, and last of all the powder.

"When," says he, "phthisis pulmonalis appears in a subacute form, and the febrile reaction running very high, carries the disease with giant strides to a fatal termination, it is necessary to adopt a treatment of corresponding energy, the effects of which will not be long in showing themselves. It is under these circumstances that it becomes necessary to give the preference to the infusion. In cases, where on the contrary the reac[illegible] is less active and of a more feeble character, the method of Neumann is not [illegible]dapted to the condition of the organism, and m[illegible]e attended with the same dangerous effects as the hydrocyanic acid. In s[illegible]ases, I always prefer the powder either alone or combined with the extract of [illegible]ite. The tincture of digitalis holds a rank intermediate between those cases [illegible]re the infusion and powder are dema[illegible]. I agree with Dr. Stoess in thinki[illegible] sometimes adv[illegible]geous tc [illegible]bine the tincture of digitalis with the ex[illegible] of aconite in the [illegible] one drachm of the extract to half an ounce of the tincture. It must [illegible]gotten that digitalis in all its p[illegible]rations is a remedy of great energy, [illegible] action of which must be superint[illegible]ed closely, for which purpose the pa[illegible] should be seen daily. The indications of its operation do not always corre[illegible]nd with its intensity."

In the extract just given from our author, allusion was made to the method of Neumann.* This consists in an infusion made by adding six ounces of water to half a drachm of the leaves of digitalis, several spoonfuls of which are to be given in the course of the day until indications are observed of the peculiar operation of the medicine, such as slight nausea, giddiness, a sensation of contraction in the throat, reduction of pulse, &c. In this case the use of the infusion must be suspended for eight days, this interval being necessary according to Neumann, attested by our author's observation, to a complete development of the effects of digitalis. Our author asserts that he has seen, in the civil hospital at Strasbourg, a most violent paroxysm of St. Vitus's dance arrested in the course of twenty-four hours by means of the infusion.

We cannot well see upon what principle an article is exhibited in phthisis, the effects of which, namely, increase of the frequency of the pulse and cutaneous transpiration, irrita[illegible]nd even inflammation of the digestive organs, indicate it to be a most decid[illegible] irritant. The medicine which occasions our embarrassment is aconite, which our author vaunts as a precious therapeutic agent, very capable of supplying the place of digitalis, when there is reason to believe this last of doubtful efficacy. In opposition to those who have pronounced the aconitum napellus one of the most redoubtable articles in the materia medica, our author asserts that it acts very mildly and almost insensibly upon the organism, and may be increased to a considerable dose without inconvenience, which circumstance renders it much more safe than digitalis, and obviates the necessity of watching its effects so closely. He recommends it under the form of pills, composed of equal parts of the powder and extract of aconite, with half a part of the sulphate of lime, but has not mentioned the precise dose. He thinks these pills well adapted to complete the cure after a long use of the digitalis, when it would be improper to [illegible]inue this last any longer. The sulphate of lime when given with the aconite should be recently prepared, and the pills preserved in a vial perfectly dry and air proof. These pills, he says, possess the advantage of never disturbing the gastric functions.

He considers it of primary importance to watch with particular care over the function of assimilation, and thinks that a milk diet, though very good when properly digested, is nevertheless often abused. He recommends light broths, preparations of sago and tapioca, and after the abatement of the febrile symptoms the use of white meats and bouillons prepared with veal, frogs and [illegible]ils. He speaks in favour of Iceland moss jelly, prepared with an ounce of the moss to two pints of water, which is to be reduced by simmering to one-half, and strained and sweetened for use—a table spoonful to be taken occasionally. To avoid too much bitterness, the pro[illegible]t of the first infusion should be thrown away.

As to D[illegible]di's method of treating syphilis, which is made t[illegible]ject of a note subjoined to this treatise, it is founded upon the old opin[illegible] a specific virus and a specific remedy. This subject has been so [illegible] reviewed in this Journal that we [illegible]ttle disposition to enter agai[illegible]n its consideration. The method of Dzo[illegible] found moreover detai[illegible]he first volume of this Journal, and in t[illegible]olume, and in Vol. VI. the [illegible]of the specific nature of syphilis [illegible]ecific remedy will be found amply d[illegible]ed.

[illegible]. F.

* Publi[illegible] in 1825, in a German Journal.

XVIII. *Manuale di Anatomia Fisiologica del Dottore* Luigi Rolando, *Professore di Anatomia nella R. Universita di Torino, Concigliere Straordinario del Magistrato del Protomedicato, &c. &c.* Tradotta ed Arrichita di molte Annotazioni dal Dottore in Medicina, Giovanni Meloni Baile. Volume Unico-Milans, 1829, pp. 338.

Manual of Physiological Anatomy. Translated from the original Latin of Professor Luigi Rolando, by Giovanni Meloni Baile, M. D. &c.

The work which we have announced above, was published several years ago in the Latin language, but had become so scarce, that the translator of the present edition was induced, with the approbation of the author, to prepare an Italian version of it, to which he has added a considerable number of notes, drawn for the most part, from modern researches. To Haller must be awarded the merit of having first given an impulse to the study of physiological anatomy; a subject which was subsequently so much enriched by the labours and discoveries of Bichat, and which has, in modern times, imposed an entirely new aspect upon the face of medical science. Anatomy and physiology are indissolubly connected with each other, and to render either contributive to useful and important purposes, they must be taken together. To arrive at a knowledge of the functions of the organization, a knowledge of its structure is indispensable; and the mere consideration of the configuration and relations of the organs, without a reference to their offices, would be an employment altogether insipid and void of utility. It is only by pursuing the course first adopted with success by Haller, and so advantageously pursued by nearly all physiologists since his time, of preceding the consideration of the functions, with some account of the structure of the organs by which they are performed, that we can expect to arrive at truth, and secure the establishment of correct principles. This has been done with considerable ability by Professor Rolando, in the work before us, in which we have numerous indications of that strength and clearness of mind which is so fully manifested in his other publications. He commences with a brief exposition of the properties of the several structures which compose the organization. These, according to the author, are, 1, the cellular, which forms all the others; 2, the medullary substance of the brain; 3, the cineritious, or cortical substance of the same organ; 4, the muscular; 5, the tendinous, ligamentous, and aponeurotic; 6, the cartilaginous; and 7, the osseous. These, under various modifications, form other arrangements, which are more perfect, among which we may mention the vascular and nervous, which are designated by the author. He next enters into the consideration of the systems or apparatuses, commencing first with the vascular, including the heart. The description of each organ, or apparatus, is followed by an exposition of its functions or uses; and in reasoning upon these, reference is always had to the characters of the structure. The rudiments of the vascular system are said by Professor Rolando, to exist in the ovum in form of a peculiar spongy lamina, even before conception. The cicatricula of an egg, according to his researches, is composed of the following [illegible] a peculiarly delicate epidermis, which envelopes the whole of the [illegible] 2, a small vesicle, which is the r[illegible]ent of the amnion, and which subse[illegible]ly forms the integuments of the animal; 3, a rounded spongy membrane, which, as the development pro-

gresses, forms the entire vascular system; and 4, the saccus vittelinus of Haller, which constitutes the amorphous rudiment of the alimentary canal. Upon the spongy membrane which forms the vascular system, become ingrafted the first traces of the nervous system, after the cicatricula become fecundated by the semen of the male. These parts soon become more conspicuous; vessels gradually make their appearance, and are at first seen communicating freely with each other. From these, arteries and veins are given off, which, influenced by the rudimentary nervous system, finally form the left auricle and ventricle of the heart, which are developed before the right cavities of that organ. While these changes are taking place in the spongy membrane, the intestines are formed by the saccus vittelinus. These sentiments are at variance with those of Malpighi and Haller, who, our author affirms, fell into the additional error of confounding the ganglions of the great sympathetic nerve with the rudiments of the vertebra.

But to return to the work under consideration, we have only to state, that though the descriptions are brief, they are generally sufficiently minute to prepare the student for the just appreciation of the functions, and that they are drawn up with clearness and accuracy. As the principal object of the author was merely to supply students with the general principles of physiological anatomy, he has refrained from entering into any minute details, and in doing so, he has furnished the junior part of the profession with a work, from which we have no hesitation in saying, they will derive much valuable instruction.

E. G.

XIX. *Anthropogénèse ou Génération de l'Homme, avec des vues de Comparaison sur les Reproductions des trois règnes de la Nature, et des Recherches sur la Conservation des Espèces et des [illegible], les ressemblances sexuelles des autres, le Croisement des Races, les Causes de la Fécondité, de la Stérilité, de l'Impuissance et sur d'Autres Phènoménes des Revivifications Naturelles.* Par J. B. Demangeon, M. D. &c. &c. Paris, 1829. pp. 346. 8vo.

In investigating the intricate subject of generation, M. Demangeon has not been content with treating of its phenomena in man alone, but has extended his researches into the three kingdoms of nature, and from a comparison of different modes adopted by nature for the reproduction and perpetuation of her works, has endeavoured to establish a theory of generation founded on what takes place, instead of on assumed facts, and oftentimes extravagant assertions. He has not, however, been satisfied with this ample field, but has pursued the subject in its relations with practical medicine and with jurisprudence. We do not think [illegible] has been altogether successful in this undertaking, though he has certainly presented the world with a work abounding in new views, which may lead to ulterior investigations, and finally tend to establish the doubtful and contested subject on a settled and fixed basis.

From the nature of the work it is impossible for us to do more at the present time than to lay before [illegible] readers an analysis of its contents, with some very cursory observations [illegible] the topics he has discussed. The first chapter is on generation in those [illegible] in which there is a known difference of sex. The author here takes a ra[illegible]iew of the reproductive process in the vegeta-

ble and animal kingdoms, making this distinction between them, "that sexuality is only a temporary phenomenon in vegetables, whilst in animals it is constant, forming in fact a property of their organization." Dr. Demangeon appears to think that *omne vivens ex ovo*, though he acknowledges that this theory will not solve all the problems which arise from the subject of generation. Chapter second is devoted to the consideration of generation in species in which the sex is unknown, or, in other words, of what has been termed equivocal generation. The author's ideas on this disputed point are very ingenious; he refuses any credit to a majority of the instances which have been adduced in proof of the truth of this doctrine, still he does admit that it may take place in certain imperfectly organized bodies, as hydatids, confervæ, &c. Chapter third treats of generation in intestinal worms. This is in truth a continuation of the preceding chapter, in which the author appears to be almost inclined to admit the fact of spontaneous generation among these animals. Chapter fourth is on the perpetuation of species, races, and resemblances by manifest sexual vivifications. These resemblances the author thinks that he has proved to depend on a relative superiority of vigor, or in the more mature age of one or other of the parents. This chapter is extremely interesting, and replete with curious facts. Chapter fifth, on the first synthesis and evolution of the embryon, is filled with hypotheses and conjectures, which are any thing but satisfactory; the author seems to have given his imagination full sway without reference to reason or facts. The next chapter, however, which is devoted to a brief exposition of the different theories of generation, contains much important matter. Chapter seventh, on the capacity for generation, and the product of the sexual secretion in males, with the hygienic causes of fecundity, in general affords many interesting data for the medico-jurist as well as for the physiologist. Chapter eighth treats of the product of the sexual secretion in females, and of their fecundation. This chapter is very unsatisfactory, and the author at last refers to Hippocrates, as giving the best account of the first formation of man. The ninth chapter, on sterility and impotence, is deserving of attention, on account of its medico-legal bearings. The author makes a clear distinction between these two states, which have been too often confounded. "Fecundity in the female is her aptitude to become a mother, and in man, the aptitude of rendering a woman fruitful. The opposite state in either sex is sterility." Impotence he defines as an impossibility of either sex to exercise the genital functions. These distinctions become extremely important as relates to questions of rape, divorce, legitimacy, &c. These states not only differ in their causes, but also in their bearings and curability. As regards hermaphrodism, which is the subject of the tenth chapter, the author is very decided in his opinion, that it never takes place in the human race, all the cases of alleged double sex being anomalous and monstrous productions, which, although presenting an appearance of an union of the male and female organs, were in reality but deformities, and that there never was an instance in which the double faculty of engendering and conceiving were concentred in the same individual. Dr. Demangeon cites a number of very extraordinary cases, which appear to be well authenticated, where the apparent union of the sexes was per[illegible]gh strictly and physiologically speaking, the unfortunate victim of th[illegible] appertained to one or the other. Chapter eleventh is on superfœtation, where a fœtus is conceived

whilst the uterus is occupied by the product of a former impregnation. This subject, which has given rise to numerous and bitter controversies, is by no means placed on its proper basis even at the present day; our author seems willing to deny its possibility, referring all the cases to twins of the same conception, but born at different epochs; in this, however, his previous theories have blinded him to the multitude of well-authenticated cases, in which there can be no doubt of the reality of this process. That many of the cases which have been referred to superfœtation, were in fact cases of twins, must be admitted, but we have also a host of instances in which such an explanation is impossible; some of these are given in the former numbers of this Journal Neither can we refer them in every case to the existence of a bilobate uterus, though it is probable that this malformation occurs in a generality of them. Chapter twelfth, with which the work concludes, is devoted to the consideration of the term of gestation and its anomalies. This contains nothing new as respects the human species, notwithstanding the great importance of the subject, but the author has collected some interesting facts in relation to the variations to which it is liable among our domestic animals. R. E. G

XX. *Darstellung blutiger heilkünstlerischer Operationen, als Leit faden zu seinen Academischen Vorlesungen und für operirende Heilkünstler, bearbeitet.* Von Christoph. Bonifacius Zang, der Chirurgie und Medicin Doctor, Sr. k. k. apost. Majestät Rathe, ordentlichem öffentlichem Lehrer der Chirurgie, &c. Ester band, Dritte Auflage, Wien, 1823. Zweyter Band, 1824 Dritter, vierter, und fünfter Band, 1818-19-21. Mit kupfertafeln, &c.

Treatise on Surgical Operations, designed as a text book for the author's Academical Lectures, &c. By Christopher Boniface Zang, Doct. of Surgery and Medicine, &c. 5 vols. Vienna, 1823–24.

We have been much gratified with the perusal of this treatise on surgical operations, and regret that we shall be obliged, for the present, to confine ourselves to a mere annunciation of its contents. It has been so well received in Germany, that the two first volumes have already passed through three editions since 1812, the date of their first publication.

The author commences with the consideration of the minor surgical operations, (*Petit Chirurgie* of the French,) as scarifications, the application of cups and leeches, venesection, arteriotomy, &c. These different topics are treated with all necessary minuteness of detail; the indications which call for the several operations, the circumstances which render them improper; the necessary apparatus, the disposition of the assistants, the position of the patient, the several [illegible]s of the operation, together with the after-treatment, being all particularly considered. We have next, an exposition of the several operations for aneurism, and for securing wounded arteries. The rules to be observed in these operations, are laid down with much clearness and precision, and the plans recommended are, for the most part, those which comport best with the anatomy of the parts concerned. The remainder of the first volume is taken up in the description of the operations for varicose veins, opening of abscesses, the extirpation of tumours, the application of cauteries, extirpation of polypi, &c.

The second volume embraces the consideration of the several operations which are performed on the head and face, eyes, mouth, and ears. All these subjects are treated with ability, and while the author advances his own opinions, he treats those of others with becoming candour and liberality. In the third, fourth, and fifth volumes, the operations which are performed on the neck, trunk, and extremities are considered, and throughout, the same clearness, the same methodical description and liberality towards the sentiments of others are evinced. Our limits will not admit of our selecting any particular portion of our author's labours, in exemplication of his manner, but we have no hesitation in affirming, that as a treatise on operative surgery, the work of Professor Zang is one of the most complete which has fallen under our observation. The work of Schreger on that subject, though possessing much value, cannot be considered as any thing more than a mere synopsis. The more elaborate treatise of Bierkowskie, though not liable to the same objection, is nevertheless defective in many important details. Its merits, too, are much indebted to the work under notice, as many of the operative proceedings are taken from it. The work of Sabatier is antiquated, although many valuable additions have been made to it by Roche and Sanson. The English language contains no good work on the subject. We have, therefore, no hesitation in declaring it as our deliberate opinion, that at the present time, the treatise of Professor Zang is decidedly the best in any language, upon the subjects of which it treats. A work of the kind is a desideratum in the English language, and we think, that any one, who would undertake the task, might, by uniting the mathematical precision of Lisfranc, with the clear and systematic details of the German surgeons, produce a work on operative surgery, which would entitle him to the lasting gratitude of all cultivators of surgical science.

E. G.

XXI. *Instructions and Observations concerning the use of the Chlorides of Soda and Lime.* By A. G. Labarraque, Member of the Royal Academy of Medicine of Paris. Translated by Jacob Porter, Member of the American Antiquarian and Geological Societies, &c. &c. New Haven, 1829, pp. 22, 8vo.

Method of using the Chloride of Soda, either for Dressing Ill-conditioned Sores, or as a means of Purifying Unhealthy Places, and of Disinfecting Animal Substances. By A. G. Labarraque, &c. &c. Translated by Jacob Porter, &c. &c. New Haven, 1830, pp. 7.

The credit of demonstrating, by a great number of experiments, the extraordinary disinfecting powers of the chloride of lime, is due to M. Labarraque, a distinguished Pharmaceutist of Paris, and it is to the facts developed by his experiments that we are also indebted for the application of the article to the cure of several diseased conditions of the body.

In the memoir at the head of this notice, the method of employing the chlorides for the purpose of destroying offensive and infectious odours is minutely detailed, and the most striking evidence of the power of those preparations adduced. Bodies exhumed for medico-legal investigations, in an insupportably offensive condition, have been rendered so free from odour that an examination could be made with perfect safety and convenience.

Instead, however, of copying the instructions given in the memoir alluded to, we shall give an extract from a report presented to the Council of Health in Paris, on the removal of the dead bodies that had been deposited in the vaults of St. Eustache after "the three days," by M. Labarraque, as it will not only exhibit the proper mode of procedure in similar cases, but afford evidence of the efficacy of the means resorted to on that occasion.

In the church of St. Eustache, forty-three bodies were interred after "the three days" in July last, and they produced so offensive an odour, that they could not be suffered to remain without detriment to the health of the neighbourhood. The council of health, therefore, determined to have them removed, and entrusted the execution of the task to M. Labarraque. In the report of this gentleman to the council, he says—

"A horrible smell filled the church, and a neighbouring house, into which it penetrated through a vent hole in a chimney funnel. Measures had been proposed to remedy this accident, but by some mismanagement in the proprietor of the house, the thing was made worse than it was before. It was intended by the Committee of the Council to establish, by means of a tube connected with the stack of chimneys, a rapid current of air, which would have most materially facilitated the removal of the corpses; but this failing, recourse was had to the expedient of opening two entrances, by which to descend into the vaults. But what with the anticipated difficulty of procuring an effective body of workmen, and the other necessaries for the accomplishment of the design, besides the apprehension of not being able to finish it in a single night, so as to leave the church at liberty for the celebration of service on the great festival, it was determined to postpone the operation until the 16th of August, at ten at night, and till then nothing more was to be done, except the neutralizing of the putrid odour which was diffusing itself in the church through the floor of one of the chapels, where some chloruret was deposited, and with complete success.

"When the appointed evening came, about half past eight, we placed, on either side of each intended opening, a trough of the capacity of about forty gallons, and a similar one at the great door of the church. Into one of the largest troughs, we threw about fourteen pounds of chloruret of lime, and upon it poured as much water as the vessel would contain. After suffering it to stand for half an hour, we decanted the liquor into the second large trough. More water was then poured upon the residue of the chloruret until it was exhausted, and finally a farther quantity of fourteen pounds more, with additional water, was poured in, until all the troughs were filled with the chloruretted fluid. Meantime, all the doors and windows of the church being thrown wide open, the operatives fell to work in effecting the new entrances into the vaults, and the moment the matlock penetrated the cavity, a copious affusion of the chloruret was made, and with such effect that the workmen did not perceive the least disagreeable odour. The size of the openings when finished was about six feet by two, and through them a plentiful shower of fluid was discharged into the vaults. By this time M. Parton had arrived with suitable vehicles, two casks for containing chloruret, and twenty stout labourers, sewer-cleaners by trade. The work was now vigorously begun. Three men, one of them from the morgue, and all accustomed to the kind of work they were going to do, equipped themselves with a protecting cover, (*en bridage*,) and went down into the vaults with lighted lamps in their hands. Two buckets of chloruret had been previously let down, and the men scattered the disinfecting liquor copiously over the walls and floor of the vault. The *bridage* interfered materially with the progress of their operations, and MM. Parent du Chatelat and M. Labarraque descended as well for the purpose of viewing the bodies and the state of the place, as to ascertain whether the workmen could safely strip off

their outer covering, and pursue their labours divested of that cause of embarrassment.

"The vaults of St. Eustache are of great extent; they are in the form of a cross, the longer limb of which measures upwards of 65 feet by 24, and the roof is 16 feet high. The transverse part of the cross is much more narrow, the height of the roof, however is the same. In one of these parts lay twelve bodies, most of them of large size. Just beneath one of the openings was a heap of earth reaching nearly to the roof, and which obliged whoever went down to creep on all fours. it happened, too, that under a portion of this heap, three more bodies were placed, that gave great trouble in their removal. The remainder of the corpses were ranged side by side through the vaults, simply covered with a slight stratum of powdered lime, which retarded their disorganization a little. A bed of lime thickly spread over the floor must necessarily have absorbed the carbonic acid, whence the reporter concludes that carbonic acid, at least in this instance, has not been the cause of the rapid disinfection of the air of the vaults, and that an exact theory of the phenomenon still remains to be discovered.

"A number of thick, compact, and spongy pieces of linen cloth were prepared. they measured each of them two metres every way; they were steeped in the trough of chloruretted liquid, and after being slightly wrung out, were conveyed down into the vault There the workmen used them one by one; each piece of cloth was laid alongside a corpse, and then the latter was drawn over upon it by means of a drag. Once on the cloth, the body by rolling was easily wrapt up in it. The envelope was then tied at head and foot with packthread, besides with a stout cord which went round the body in three places, after which four of the men took it up and laid it beside the opening, where it was sprinkled with the fluid, and then five more men conveyed it to the carriage. On its passage to, and deposition in the vehicle, it was again sprinkled with chloruret. During the whole of these operations the labourers, who relieved one another alternately, took care from time to time to bathe their hands in the disinfecting fluid, and to make such repeated sprinklings about the opening of the vault, that the atmosphere in that quarter was fully charged with the chloruretted vapours. The removal of the forty-three bodies was begun about a quarter past ten, and brought to a conclusion, without any accident, at half past one; and should have been finished sooner, but for the difficulty of getting at the three last corpses. About half the fluid was still remaining, and was poured out on the floor of the vaults, in order to remove the troughs the more readily.

"But the deputies of the Council of Health did not deem their task yet completed: one of them proceeded to the cemetery Montmartre, along with M. Baron, and all the labourers who were employed in the work we have just detailed. The bodies were conveyed in seven carriages; an eighth carried the utensils, and was followed by two hogsheads of fluid, and a cart full of quicklime. The procession set out at two in the morning, and was conducted with all that respectful attention which is so sacred to the mourning soul.

"A common grave, of eleven metres in length by about four and a half in breadth, and two in depth, had been laid out for them by order of the prefect of the Seine. In this the corpses were deposited, after having been once more well sprinkled with chloruretted liquor, which we prepared on the spot by the admixture of a pound of chloruret to six buckets of water. The men who laid the bodies in the grave were provided with this liquor, and those who were occupied in unloading the carriages also made much use of it. In fine, the *victims*, after having been decently settled, were covered with quicklime and then with earth."

The disinfection was rapid and complete, and the removal unattended with danger.

As a disinfecting agent the chlorides of lime and soda are indeed invaluable,

but their utility is not restricted to such purpose. It has been successfully used in a gangrenous affection of the jaw, by Dr. Rey—in venereal ulcers by Dr. Goosse—in certain ulcers by M. Cullerier—in scald head by Dr. Roche—by M. Lisfranc in burns and common ulcers—by M. Bouley, fils, in gangrenous tumours—by Dr. Horner in a case of ozena—and by Messrs. Graves and Stokes in a case of pectoral disease with great fetor of breath and expectoration. It has been used also with great advantage by M. Biett in certain herpetic affections—by M. Jules Cloquet in gangrenous ulcers—by Professor Marjolin and Dr. Segalas in gangrenous affections—by MM. Sanson and Lagneau in ulcerations of the mouth and caries of the bone—by Dr. Cantourelle in two cases of malignant sore throat; and we have no doubt that it may be usefully employed in the gangrenous sore mouth of children. We have employed it ourselves with advantage as a collyrium in purulent ophthalmia, and as an injection in gonorrhœa and little doubt can be entertained that it may be beneficially resorted to in many other complaints. The powers of the remedy have, however, as yet not been fully investigated, nor its precise value determined in those diseases to the cure of which it has thus far been applied.

It is not our object at present to enter into minute details, but rather to attract the attention of the profession to the substance, that its powers may be more satisfactorily ascertained we will only add that it is usually employed in solution of various degrees of strength, and will refer the reader for further details of its medical application, to the Periscope of our previous numbers, in which we have been careful to record, as they have been published, the results of the experiments that have been made with it.

XXII. *Nuovi Elementi di Anatomia, ad uso delle Scuole di* Floriano Caldani Tom. primo e secundo, pp. 806. Bologna, 1827.

Elements of Anatomy, for the use of students. By Floriano Caldani, 2 vols Bologna, 1827.

The work which we have here announced, is merely a translation of the Latin edition of the Institutiones Anatomicæ of Leopold Caldani, the uncle of the present editor, which was published several years ago. The arrangement has, however, been considerably altered, and numerous additions have been made to bring it up with the present state of anatomical science. With regard to the execution of the work, it is needless we should say much. The descriptions are in general sufficiently clear, but in many parts we think the author has left his subject very far in the rear of the present improved state of anatomical knowledge. In some respects, however, it must be confessed, that Professor Caldani has executed his task in a creditable manner, and as an elementary treatise for students, for whose use it was expressly composed, it will doubtless be found useful. In conclusion, we should state, that the present work is by the author of the splendid collection of anatomical plates, published under the title, Icones Anatomicæ, quotquot sunt celebriores, ex optimis neotericorum operibus summa diligentia deprompta et collectæ, Venetiis, 1801-14, in fol.

E. G

XXIII *Lehrbuch der Pathologischen Anatomie des Menschen und der Thiere.* Von Dr Adolph Wilhelm Otto Koniglichem Medicinalrathe in Medicinal collegium fur Schleisen, ordentlichem Professor der Medicin an der Universitat und der Medicinischen Chirurgischen Lehranstalt zu Breslau, &c. &c Erster Band. pp. 472, Berlin, 1830.

Elements of Pathological Anatomy of Man and Animals. By Adolph Wilhelm Otto, M. D. &c. 1st vol. Berlin, 1830.

Pathological anatomy has been, within the last twenty years, cultivated with great zeal and ability in Germany, and the medical literature of the country has, within that time, been enriched by numerous treatises on the subject, which have contributed powerfully to extend the boundary and augment the usefulness of the science. Amongst these may be enumerated the work, the title of which is affixed to this notice. Dr. Otto is a distinguished professor at Breslau, and has been for some time advantageously known, by the publication of several works of merit, and especially by his manual of Pathological Anatomy, which was printed in 1814. The present undertaking professes to be an entire new work, for the reason, as the author informs us, that since the period at which his manual was published, the principles of the science have become greatly changed, and his own opinions have undergone such an alteration, as to render a republication of the same work inexpedient. In the treatise before us, the various lesions are referred to some derangement, either of quantity or quality, implicating the function of nutrition: or to a mechanical separation of the natural connexions of the organization. The structures, under either of these modifications, must, moreover, according to Dr. Otto, be considered in reference to their situation, volume, configuration, position, connexions, colour, consistence, continuity, texture, and the parts they contain. It will readily be seen, that under these several heads, may be very conveniently arranged every thing important, appertaining to pathological anatomy. This the author attempts by examining first the general properties of each of the conditions enumerated, after which he proceeds to consider them as developed in the several tissues which compose the organization. In the performance of this undertaking, he has not only carefully described the various lesions to which the several structures are liable, but has also enriched his work with an exceedingly copious collection of references to cases and instances illustrative of the principles discussed, and to works which furnish valuable information on the subject. This portion of the work is the most extensive, and although valuable to the student, it is, we think, carried to an unnecessary degree of minuteness. Where we meet in a work with so copious a list of references, we are too apt to suspect that the author has taken many of them at second hand, and consequently that many of them cannot be relied upon. We would not be understood to apply this to Professor Otto; but merely to express it as our opinion, that his work would have been quite as useful without having such a formal display of references appended to it. But notwithstanding this defect, it gives us much pleasure to state, that we have been much pleased with the work, and we can confidently recommend the part which has been published, as containing much important information. E. G.

XXIV. *The Influence of Climate in the Prevention and Cure of Chronic Diseases, more particularly of the Chest and Digestive Organs: comprising an account of the Principal Places resorted to by Invalids in England, the South of Europe, &c.; a Comparative Estimate of their Respective Merits in Particular Diseases, and General Directions for Invalids while Travelling and Residing Abroad With an Appendix, containing a Series of Tables on Climate.* By JAMES CLARK, M. D. Member of the Royal College of Physicians of London, Corresponding Member of the Royal Medical Society of Marseilles, of the Medico-Chirurgical Society of Naples, of the Medical and Physical Society of Florence, of the Academy of Sciences of Sienna, and Physician in Ordinary to his Royal Highness Prince Leopold of Saxe-Coburg. Second Edition, enlarged. London, 1830, pp. 400. 8vo.

The first edition of this valuable work was reviewed in the fifth volume of this Journal, on which occasion we expressed the favourable opinion entertained by us of its merits: we have now the pleasure of introducing to our readers a second edition, enriched by some very interesting additional information respecting the climate of certain parts of England, of the principal islands of the Northern Atlantic Ocean, and the West Indies.

We hope that the author will in his next edition, which we are sure will be required, insert such facts as he may be able to collect respecting the climate of America. Such an addition would render his work more valuable abroad, and ensure it an extensive circulation in this country.

Physicians who are sending patients to Europe for the benefit of change of climate, and invalids who cross the Atlantic for their health, will find in the work of Dr. Clark information that will be invaluable to them, and which they cannot obtain elsewhere.

XXV. *Elements of General Anatomy, or a description of every kind of organs composing the human body, by* P. A. BECLARD, *Professor of Anatomy of the Faculty of Medicine of Paris. Preceded by a critical and biographical memoir of the life and writings of the author, by* OLLIVIER, M. D. Translated from the French, with notes, by JOSEPH TOGNO, M. D. member of the Philadelphia Medical Society. pp. 541. Philadelphia. Carey & Lea. 1830.

We are pleased to find that our medical community are becoming daily convinced of the importance, and even the necessity of the study of general anatomy, and still more gratified at the increased facilities which are every day springing up, to aid the student in the acquisition of that knowledge which can alone place the principles of physiology and pathology, and with them every department of the science, upon a secure and useful foundation. Amongst these, we are happy to find an English version of the excellent treatise of Professor BECLARD, on General Anatomy. The original work has been before the public since 1823, and constitutes one of our most valuable acquisitions to stores of medical literature, since the appearance of the work of the immortal Bichat. Indeed, the author of the present treatise may be justly considered as a kind of successor to the great man, whose name we have just mentioned. Emulating

his zeal, he ably trod in his footsteps. He early became engaged in similar pursuits, and by his great abilities, contributed to enrich the science with new and valuable accessions. Like Bichat he lived, and like him he died—extending on the one hand the bounds of the science, and enriching its domain, and on the other cut off in the midst of his usefulness; but not until he had done enough to convince us that his loss was irreparable. Like him, too, he composed one of the most important works which has ever appeared on the subject of anatomy. This, then, is the man, and this the source of the work, for the translation of which we are indebted to Dr. Togno. In conclusion, we will only observe, that the translation, though not characterized by elegance of diction, for the most part accurately represents the meaning of the author. We repeat, that the work of Professor Beclard is one of the most valuable we possess on general anatomy, and that no physician or student should be without it on his shelves or in his study. E. G.

XXVI. *Sketches of the Character and Writings of Eminent Living Surgeons and Physicians of Paris.* Translated from the French of J. L. H. P. by Elisha Bartlett, M. D. Boston, 1831.

This is said to be the production of a young advocate of Paris, and if this be the fact, the extensive and minute acquaintance which the author displays of the character and writings of the men who figure in the medical world of Paris is truly extraordinary. His sketches of their characters are exceedingly spirited and graphic—and his criticisms of their writings are mostly just, always lively, and frequently very piquant. It is indeed one of the most entertaining little books that we have met with for a long time, and at the same time very instructive, and Dr. Bartlett has conferred a benefit on the profession in translating it We cannot refuse ourselves the pleasure of quoting the following just remarks from the translator's preface.

He states that one of the objects of the publication is to awaken in the younger members of the medical body, by the influence of high examples, a more devoted and worthy emulation of the great masters of our art; and then adds:—

"The contemplation of this exalted excellence in others may show us more clearly our own deficiencies, and arouse us to the efforts necessary to supply them. After making all reasonable allowance for natural tact or talent, and for the facilities and advantages of instruction to be had in extensive medical establishments, it will be found that *study*, intense, untiring, unremitted *study*, is the only foundation of professional worth and distinction. Has not medical science in our own country felt, in some degree, the withering influence of the superficial literature of the age? Let us look at Dupuytren, the unrivalled chief of modern surgery, holding, while a boy, offices which were the reward only of solid scientific knowledge; at Beclard; at Bichat, who, dying at the age of thirty-one, left behind him a reputation second only to that of John Hunter. These men have imprinted, deeply and indelibly, the traces of their labours on medical science, and the history of their lives may teach us that similar honours can be won only by similar means."

The following observations, by the author, on eclecticism, are worthy of consideration:—

"Some men, especially at the present day, have taken refuge in an eclectic system, (*eclectisme;*) but they cannot maintain themselves in this. In effect,

eclectism is sheer nonsense in medicine. This word signifies to choose among the most reasonable systems, or to adopt the most rational portions of each system, and the best methods of treatment. Behold the practitioner well advanced, to be sure! How shall he choose, and how estimate the value of his choice? By reasoning. Yes, let him reason on this immense number of facts of every species; let him read twenty thousand volumes; let him discuss the whole, according to the laws of medical and historical criticism; and then, let him indicate, *à priori*, what things it is necessary to believe and to do, and he will find himself the inventor of the newest, and certainly the most extravagant system in the world. But he will be governed [illegible] experience! The experience of whom? He has only his own, for that of [illegible] past time and of the present must be controlled, for herein consists the very essence of *eclectism*. The practitioner is thus reduced to his own personal experience, and to the necessity of recommencing the labour of centuries, which have taught him nothing. This is not indeed true of all branches of medicine. I know that the experience of centuries has left, floating above the ruins of systems, some rules of practice generally admitted in all places and in all times; but they are few in number, and reduce themselves rather to the principles of hygiene than of cure; and they may be found in Hippocrates, who discovered them, because he was one of the best observer[illegible]d the first. But this does not constitute a science."

We have already [illegible]d the original in a preceding number of this Journal, and of course shall not go again over the same ground; our object is merely to call the attention of the profession to the translation, from the perusal of which we can promise the reader both entertainment and instruction.

XXVII. *Encyclopädisches Wöterbuch der Medicinischen Wissenschaften herausgegeben von den Professor en der Medicinischen Facultät Zu Berlin:* D. W. H. Busch, C. F. v. G[illegible], C. W. Hufeland, H. F. Link, K. A. Rudolphi. Fümfler Band. (Ba[illegible]ge—blutflu[illegible]) Berlin, 1830.

We are highly [illegible]d with the ability manifested by the Professors of the University of Ber[illegible] and their talented contributors, in conducting the Medical Encyclopædia, to which we have already several times called the attention of our readers. We have received the fifth vo[illegible], as announced above, and feel assured, from a hasty exam[illegible]tion of its contents, that it merits all the praise bestowed upon those which have preceded it. Many of the articles are elaborate, and evince much taste, ability, and research on the part of the writers; most of them are creditable, and we think we do not say too much, when we affirm, that the entire work, as far as it has yet progressed, may safely challenge a comparison with any similar publication. On some more convenient occasion [illegible] propose to furnish our readers with an analysis of some of the leading ar[illegible]. In the mean time, we confidently assure the distinguished editors, that the remaining part of the work will be awaited with anxiety, and hailed with pleasure, by every zealous cultivator of German medical literature on this side the Atlantic.

E. G.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Malformation of the Eyes.*—Professor MARSE, of Brunswick, relates in *Schweigger's Journal*, the case of a girl, aged twenty-one, in whose eyes the lens is situated immediately behind the cornea; the iris is closed, but is very thin, and is pushed backwards so as to be almost funnel-shaped. The lens and iris are both completely transparent, so that the choroid may be seen through them. The individual could, until lately, see very well, except in a strong light; and it was not until cataract began to form in the right eye that the singular position of the lens was observed. The eyelids are remarkably thin and wrinkled, and appear almost to indicate a tendency of nature to compensate in some degree the absence of the natural function of the iris.

2. *Metallic Mixture for injecting Anatomical Preparations.*—The following alloy is recommended:—℞. tin by weight, 177 parts, lead 310, mercury 101.26, bismuth 497. The bismuth, tin, and lead are to be heated with a little powdered charcoal, until the mass comes into fusion; it is then to be removed from the fire, and the quicksilver gradually added after having been previously heated. The mixture has the brightness of silver, is perfectly fluid at 173°, and becomes solid at 140°.

3. *Congenital absence of the Iris.*—In our sixth Vol. p. 215, we noticed most of the known cases in which this rare malformation has occurred. Three additional cases, all occurring in the same family, have, however, since been related by Dr. HENTZSCHEL, of Chemnitz, in Saxony, in *Ammon. Zeitschr. für Ophthalmologie.* The subjects of these cases are three sisters, whose mother's eyes are well formed, but the upper portion of the irides of their father's is entirely wanting. He is presbiopic, and cannot bear any strong light, and is subject to ophthalmia. In the eldest, aged twenty-eight, the iris is completely deficient—she suffers greatly from photophobia, and is almost constantly affected with ophthalmia. In the second sister, aged twenty-one, nearly the same symptoms are observable—there is no iris in either eye—she is affected with photophobia, and is exceedingly liable to ophthalmia. The sclerotic is so thin as to permit the choroid to shine through it at several points. In the left eye vision is very imperfect. In the youngest, aged thirteen, the sight is also impaired, though to a less degree than in her sisters. Their parents have two more children, a girl and boy, whose eyes are perfectly well formed.

4. *Nerves of the Cornea.*—Professor SCHLEMM, of Berlin, is said to have discovered these nerves, and that they originate from the superficial branches of the ciliary nerves, and may be traced along the sclerotic coat, and over the orbiculus ciliaris towards the cornea, between which and the sclerotic they penetrate and become imperceptible.

PHYSIOLOGY.

5. *Experiments on Pulmonary Absorption and Exhalation.*—M. Collard de Martigny has published in the *Journal Complementaire* for May and August last, an account of some interesting set of experiments, undertaken for the purpose of determining some of the disputed points in the chemical physiology of respiration. Not having received that Journal, we are indebted to the *Edinburgh Medical and Surgical Journal*, for a summary of his principal results. They are the following:—

1. According to the doctrine of Lagrange, which is a modification of the original theory of Lavoisier, oxygen gas is absorbed *in substance* by the venous blood in passing through the lungs, and does not unite with oxygen to form carbonic acid till it has proceeded with the arterial blood to the capillaries. This opinion rests merely on some imperfect experiments by Girtanner, who thought he discovered oxygen in arterial blood. It is singular that these experiments should not have been repeated till now, as they obviously, if correct, lead to a very precise and important conclusion. On trying them, M. Collard de Martigny procured results decidedly negative. Having filled a tube thirty-six inches long with mercury, and reversed it so as to produce a barometric vacuum, he admitted [illegible] an inch of fresh arterial blood from the crural artery of a living dog, and [illegible] apparatus at rest for an hour and a half. At this time, the mercury having descended considerably, the gas which had been developed was transferred into a graduated tube, and acted on by caustic potass. The whole of it was entirely absorbed, and consequently consisted of carbonic acid only.

2. The more prevalent doctrine at present is, that the oxygen which is absorbed by the blood in its passage through the lungs *unites with* the blood; that carbonic acid is formed in the capillaries by the various processes of nutrition and secretion; and that the carbonic acid thus formed is given off in the lungs by a process of exhalation and secretion, independently of the presence of oxygen. This doctrine rests mainly on an experiment first performed by Girtanner and afterwards more carefully by Edwards—where a frog, being made to breathe hydrogen, gave off nevertheless more than its own bulk of carbonic acid in the course of a few hours. This result, if the mode of experimenting is free from fallacy, is decisive of the question. It proves, that the carbonic acid given off during respiration, is not formed in the lungs by the union of oxygen with the carbon of the venous blood in its passage through the pulmonary circulation, but arrives with the venous blood in the lungs ready-formed, and is, in short, the product of the various functions of the capillaries. But M. Collard de Martigny considers, that even the method of experimenting pursued by Dr. Edwards its liable to fallacy. On the one hand, hydrogen and carbonic acid are so different in density that they mingle slowly, and in consequence an analysis of a portion of the mixture does not represent the composition of the whole mass. And on the other hand, according to a law in physics, the tissues of the body, being impregnated with carbonic acid, must give out that gas when immersed in an atmosphere of any other gas. To obviate the former fallacy he substituted azote for hydrogen; and to do away as much as possible with the latter, he withdrew and analyzed the air in which the animal was confined once every hour or every two hours and replaced it by pure azote—so that in this way he could ascertain whether carbonic acid was given out only at first, and therefore arose merely from the displacement of the gas diffused through the textures, or continued throughout the whole duration of the experiment, and consequently arose from the secretion of the gas by the lungs. In every experiment he found carbonic acid given out in considerable quantity as Edwards also invariably remarked. In an interval varying from seven and a half to nine hours, he procured in seven different experiments from $2\frac{1}{2}$ to $2\frac{3}{4}$ centilitres, or between $1\frac{2}{3}$ and $1\frac{3}{4}$ cubic inch of carbonic acid. In every instance

he found nearly twice as much gas formed during the first period, as during any subsequent period, which he attributes to the displacement of carbonic acid in the textures by the azote. But after the first period the quantity formed in every equal period of time was nearly the same till the animal began to become torpid and the respiration to languish, when the formation of carbonic acid rapidly decreased. Hence he concludes that after the first period, the carbonic acid is derived solely from the blood in the lungs.

The exhalation of carbonic acid from the lungs, then, is independent of oxygen being supplied to it. The presumption must consequently be, that it is secreted or excreted by the blood in the lungs. But in order to establish this doctrine satisfactorily, it is necessary to show that the blood in passing through the lungs, really loses carbonic acid—a point which no one before M. Collard de Martigny has endeavoured to ascertain. He has proved it, however, as he conceives, by a comparative examination of the arterial and venous blood of the same animal. When each was collected directly from the blood-vessels in a barometric vacuum, as formerly described, he found that venous blood almost always gave out twice, and on one occasion, thrice as much carbonic acid as the arterial blood. But when respiration was suspended by exhausting the lungs, and tying the trachea, the arterial blood was found to contain as much carbonic acid as the blood in the veins.

3. Physiologists have differed with one another as [illegible] question, whether the carbonic acid gas given out in the lungs is eq[illegible] to the oxygen absorbed by them; but, on the whole, the prevailing opinion is, that more oxygen is absorbed than is accounted for by the carbonic acid exhaled. M. Collard de Martigny arrives at the same conclusion by a series of experiments, apparently more free from fallacy than any previously made. The chief difficulty is to avoid the fallacy arising from the probability of the air in the lungs of the animal at the beginning of the experiment not corresponding in quantity with what remains at the end. The author got rid, as he conceives, of this difficulty, by not confining the animal in the jar of air to be breathed, but by fixing a tube in its trachea, exhausting the air in its lungs, then establishing a communication by means of the tube between the lungs and the jar, and, at the end of the experiment, expelling the residual air of the lu[illegible]jar by strong pressure of the chest. He has related the particula[illegible] experiments of this kind, of which eight were performed with the [illegible]bit, and one with the Guinea-pig. In four of them, the quantity of air breathed was four *litres*, or 244 English cubic inches; [illegible] others, it was three *litres* and a half, or 213 cubic inches, in one it was 183 cubic inches; and the duration of the experiment varied from nine to fifteen minutes. In the largest quantity of air, the quantity of oxygen was 51.2 cubic inches. Of this there remained unaccounted for by the residue of oxygen, together with the carbonic acid evolved, [illegible]6.5, 16.3, 16.9, and 16.9 cubic inches in four different experiments. In [illegible] four experiments with 213 cubic inches of air, the total oxygen being 44.8 cubic inches, there remained unaccounted for, in like manner, 2.3, 4.7, 7.1, 10.4, and 18.4 cubic inches. In the experiment with 183 cubic inches, where the oxygen was 38.4, the quantity unaccounted for was 4.7 cubic inches.* In all these experiments, then, it is clear, that a large, though variable quantity of oxygen gas disappears—a larger quantity is absorbed than is given off in the form of

* The particulars are contained in the following tables, which are carefully calculated from the original tables of the author.

Oxygen in Air before Respiration.	Oxygen remaining.	Carbonic Acid.	Oxygen disappeared.
1. 51.2	22	12.3	16.9
2.	27.1	17.6	6.5
3.	[illegible]	11.8	16.9
4.	[illegible]	14.6	16.3
5. 44.8	[illegible]	17.0	10.4
6.	14.4	12.0	18.4
7.	19.7	22.7	2.3
8.	18.7	19.0	7 ;
9. 38.4	15.3	18.4	4.[illegible]

carbonic acid. But we must observe that M. Collard de Martigny commits a serious oversight in supposing that his method of experimenting is free of fallacy, or represents natural respiration. On the contrary, after the first inspiration, the animal breathes an atmosphere considerably impregnated with carbonic acid gas; consequently the blood absorbs the gas, which it is very well known to do when a moderate proportion of carbonic acid in the air is presented to it; and in this way the apparent disappearance of oxygen may be sufficiently accounted for.

4. Another point of dispute among physiologists who have occupied themselves with this subject, is whether any azote is given off or absorbed. On the whole, the greater number of authorities unite in finding that a small quantity is given off. But of late, much confidence has been reposed in the experiments of Dr. Edwards, who found that azote is sometimes absorbed, and sometimes given off, according to the season of the year. M. Collard de Martigny is at variance, however, with Dr. Edwards on this point, having invariably found in many trials at different seasons that a small quantity of azote is given off. In the experiments formerly mentioned to determine the proportion of oxygen which disappears in respiration, he found in four trials with 244 cubic inches of air, that azote was exhaled to the amount of 1.9, 1.8, 1.6, and 0.1 cubic inch; in four trials with 218 cubic inches, the quantity exhaled was 4.1, 3.6, 1.8, and 1.3 cubic inches; [illegible] one trial with 183 cubic inches, the quantity was 4 cubic inches.

5. Lastly, M. Collard de Martigny considers the question, whether any water is formed in the lungs by the union of the oxygen of the air with the hydrogen of the blood. The idea that water is so formed has been, we believe, universally abandoned in Britain for some time, and we were not aware that this branch of the Lavoisierian doctrine of respiration still met with its favourers in France. It may be at the same time true, as our author states, that it is a notion more easily rejected than disproved. The objection first urged against it, that hydrogen never unites with oxygen at so low a temperature as 100°, was met with the rejoinder, that such union readily occurs when the hydrogen is in a *nascent* state. But M. Collard de Martigny objects, that according to his own experiments, and those of M. Chevallier, hydrogen is never in a nascent state [illegible] contact with azote without ammonia being formed, which he has never found in the halitus of the respiration. Another objection is, that whether common air or azote be respired, the quantity of halitus formed is pretty nearly the same.

In a paper which will appear presently, the author of the present essay undertakes to prove that *animal heat is altogether independent of respiration*.

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6. *Animal Heat.*—It has been maintained by many physiologists, that animal heat was entirely generated in the lungs by the process of respiration; and they attempt to account for its increase in those diseases in which the lungs are rendered impervious to air; by the supposition that respiration is in such instances carried on with more rapidity in the parts still pervious. A case entirely at variance with this hypothesis is related by Drs. Graves and Stokes. The patient laboured under very extensive development of tubercles, had tubercular abscesses in the superior portions of both lungs, and general bronchitis. In this case, at a period when the skin was hotter than usual, and the pulse 126, the respirations were only 14 in the minute.—*Dublin Hospital Reports, Vol. V.*

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7. *Circulation in Vegetables.*—On the 27th of September, MM. Henri Cassini and Mirbel made a report upon the vegeto-anatomical and physiological observations presented by Dr. Schultz to the Academy of Sciences. It appears that a circulation takes place in vegetables, comparable, in some respects, to that in animals. In fact, when the vessels in a portion of stem, an inch or two long, and two or three lines in width, are considered, assent cannot be refused to the idea, that a vital juice exists, and that it passes several times by the same

path. But there is this remarkable difference between the circulation in vegetables and in animals of a high order, that in the latter there is one point in which terminate two vascular systems very distinct from each other, one carrying the blood to the extremities of the body, the other collecting it and conducting it to its source; nor any double vascular system. Vessels of the same nature form a net-work, of which the meshes are so many similar circulating apparatus communicating with each other, so that there is a common motion through them whilst the parts live together, and a motion proper to each so soon as they are separated. The discovery of M. Schultz is of the highest interest for the anatomy and physiology of vegetables; it enlightens these two branches of science, the one by the other, and it proves relations to exist between animals and vegetables, which before were not even suspected to exist.—*Journal of the Royal Inst. G. B. Feb.* 1831, *from the Ann. de Sciences Nat. Vol. XXI.*

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8. *Mutual action of Blood and Atmospheric Air.*—Professor Christison, one of the most learned medico-legal jurists and skilful chemists of the present day, has communicated to the Royal Society of Edinburg, some extremely interesting experiments instituted for the purpose of ascertaining what changes really take place in the blood when exposed to the action of atmospheric air, and whether the arterialization of the blood in the lungs is a vital or physical process.

It has generally been considered by physiologists and chemists, that when venous blood is brought into contact with atmospheric air out of the body, the blood changes its colour from dark purple to bright crimson, while the air loses a part of its oxygen and acquires carbonic acid. This has, however, been lately denied by Dr. John Davy, who states as the results of many trials, that atmospheric air and blood recently drawn from a vein have no mutual action whatever; that the colour of the blood is not changed; that no oxygen disappears from the air, and that no carbonic acid is formed in it. With regard to the change of colour in the blood, Dr. Christison says that in his experiments, purple venous blood always became, when agitated with air, bright crimson, and the difference of tint was so great that no one could mistake the two varieties of blood.

Dr. Christison is also at variance with Dr. Davy, as to the alterations which the air undergoes during the changes effected in the colour of the blood, and his experiments appear to us conclusive. These experiments prove that when venous blood acquires the arterial colour by agitation with atmospheric air, that a considerable portion of the oxygen of the air disappears, that carbonic acid is formed, and that the process of arterialization, so far as regards the changes which the blood undergoes in colour, and the air in composition, is a chemical and not a vital phenomenon.—*Ed. Med. and Surg. Journ. Jan.* 1831.

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9. *Seat of the Sense of Taste.*—The following general experiments and conclusions are from a work on the seat of this sense, by MM. Guyot and Admyrauld. I. If the anterior extremity of the tongue be enclosed in a very soft, flexible case of parchment, so as to cover it completely, jelly, and in general all bodies may be introduced into the mouth, and crushed between the teeth without any taste being distinguishable. The same effect is obtained also by retaining the tongue apart from the cheeks or teeth; sapid objects placed beyond its action give no sensation of taste. The tongue, therefore, is the essential organ of taste; the lips, palate, cheeks, and gums have no power of this kind.

II. Nevertheless, if the tongue be entirely covered, and very sapid substances be swallowed, a little taste is perceived at the posterior part of the *velum palatum.* If the palatal arch be covered with parchment, a sapid body produces its ordinary effect upon the tongue. If a little piece of extract of aloes be fixed upon the end of a rod, and passed over the palate and the roof of the

mouth, it produces no other sensation than that of touching; but on the anterior and upper part of the soft palate there is a small portion of surface, not having definite limits, where the impression of sapid bodies is very sensible: the back part of the mouth does not partake in this property, so that this small portion of the palatal vault with the tongue forms the organ of taste.

III. If the tongue be covered with parchment, pierced at the middle of its back surface, sapid bodies applied to the part produce no taste, until, being dissolved in the saliva, they gain access to the edge of the tongue. Extract of aloes passed over various parts of the tongue produce sapid impressions within a space of only one or two lines at the sides, three or four at the point, and within a curved space at the back. Hence this part of the tongue and the lateral portions are the especial organs of taste in deglutition; and to the portion of the soft palate already mentioned prolongs the sensation.—*Journal of the Royal Inst. of G. B. No. 2, from the Bib. Univer.* 1830.

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10. *Brown's Moving Molecules.*—We gave in Vol. IV. p. 200, of this Journal, an account of the discovery of active molecules in inorganic bodies, by Mr. Brown, and at page 474 of the same volume, and p. 475, Vol. V. will be found some further illustrations of this curious phenomenon. M. Muncke, of Heidelberg, has also been investigating this subject, and we find the following notice of his experiments in the *Journal of the Royal Institution of Great Britain* for February last.—M. M. finds the following a simple and easy mode of showing the motions of particles;—triturate a piece of gamboge the size of a pin's head in a large drop of water on a glass plate; take as much of this solution as will hang on the head of a pin, dilute it again with a drop of water, and then bring under the microscope as much as amounts to half a millet-seed;—there are then observable in the fluid small brownish-yellow points, generally round, (but also of other forms,) of the size of a small grain of gunpowder, distant from one another from 0.20 to 1 line. These points are in perpetual motion, varying in velocity, so that they move through an apparent space of 1 line in from 0.5 [illegible] or [illegible] seconds. If fine oil of almonds be employed in place of water, no [illegible] particles takes place, but in spirit of wine it is so rapid as scarcely to be [illegible]ed by the eye. This motion certainly bears some resemblance to that observed in infusory animals, but the latter show more of voluntary action. The idea of vitality is [illegible]t of the question. On the contrary, the motions may be viewed as of a mechanical nature, caused by the unequal temperature of the strongly illuminated water, its evaporation, currents of air, heated currents, &c. If the diameter of a drop be 0.5 of a line, we obtain, by magnifying 500 times, an apparent mass of water, of more than a foot and a half broad, with small particles swimming in it; and if we consider their [illegible] magnified to an equal degree, the phenomenon ceases to be wonderful, without, however, losing any thing of its interest.

PATHOLOGY.

11. *Cause of Stammering.*—In our sixth volume, p. 233, et seq. we published Dr. Arnott's explanation of the nature of stammering; and we find in a recent No. of the *Journal of the Royal Institution of Great Britain* some interesting observations on this explanation, by Marshall Hall, M. D. which we will now lay before our readers.

Dr. Hall is of opinion that Dr. Arnott's view of the subject is [illegible] from being correct, that it is only in the articulation of certain letters that expiration is interrupted, and even in this case the interruption is not in the larynx, the organ of voice, but in some part of the mouth, or organ of speech. "It will assist us," says Dr. Hall, "in the determination of the question, to take a review of the influence which the natural articulation has

upon respiration, or rather upon expiration. It may be ascertained, by the simplest experiment, that in the pronunciation of the short word BAT, we adopt a mechanism, by which not only the different letters are formed, but the respiration is twice completely arrested;—and that, in the pronunciation of the equally short word FAN, we first interrupt the flow of the air through the nostrils whilst it is forced between the teeth and lower lip, and then intercept the course of the air through the mouth, whilst we allow it to pass only through the nostrils.

"It is on their influence on the respiration, that I formed the division and arrangement of the consonants, published in the nineteenth volume of this Journal; their sub-division was founded on the respective mode or mechanism of their enunciation. I divided them—

"1. Into those, in the articulation of which both the mouth and the nostrils are closed, and the respiration, of course, completely arrested:

"2. Into those, in the enunciation of which the nostrils are closed, but the mouth left more or less open, for the exit of the air, which is compressed, but not interrupted in its expiration:

"3. Into those, not requiring even the nostrils to be closed, and in the enunciation of which the air is still less compressed in its course from the lungs. and,

"4. Into those, in the articulation of which the expired air is not interrupted, and scarcely impeded at all.

"Of the *first* class, are

B D G*
P T K

"In tracing these letters into their sub-divisions, we may observe, that the first pair are labials, being formed by the lips compress[illegible]; the second pair are linguo-dentals, formed by pressing the point [illegible] against the posterior and upper part of the upper teeth; and t[illegible] linguo-palatal, being effected by pressing the middle part of the [illegible]gue [illegible]inst the palate. In all, the posterior apertures of the nos[illegible] e[illegible]osed by the pendulous vail of the palate being drawn up[illegible] applied to their posterior apertures. And of course, those p[illegible] whose palate is perforated, or in whom the pe[illegible]lous vail of the palate [illegible]perfect, as sometimes arises from disease, are [illegible] less incapacitated from pronouncing these letters, the expired air being [illegible]er intercepted, as it ought to be, in its course.

"Of the *second* class, are

F/V; the TH†; and S/Z.

"In the articulation of these letters, the posterior orifices of th[illegible] are requi[illegible] be closed, whilst, in the first pair, the compressed air [illegible]lly forced between the upper teeth and under lip; in the second, bet[illegible] teeth and the tongue; and in the third, between the point of the tongue and the anter[illegible]e palate.

"From th[illegible]ew of the subject, it will be readily apprehended how the substitution of D or T for the TH, by foreigners, is so remarkable; for it is no less than the substitution of a total interruption, for a mere compression of the air, in its exit from the chest.

"Of the *third* class of letters, are

M; N; L; [illegible]

"In th[illegible]unciation of these letters, the expired air is only very slightly compressed, [illegible] nostrils being left freely open. It is for this very reason, probably, that [illegible]rs have been termed *liquids*, as flowing without obstacle. And it is by th[illegible] circumstance, principally, extraordinary as it may appear, that the letter M differs from the letters B and P, for they are all equally labial; and

* i. e. the *hard* G.
† *Hard* and *soft*.

that the letter N differs from T and D, for they are all equally formed by placing the point of the tongue near the roots of the upper teeth.

"Of the *fourth* and last class, are

H; the Greek X, Y; and W.

"In the enunciation of these consonants, the air appears to be scarcely compressed or impeded in its exit at all. This fact may, I think, account for the circumstance, that it has even been doubted, whether the two last letters be really consonants or not; and for the remarkable fact, that they cannot, as *consonants*, form the termination of any word. Their mechanism is guttural, double dental, and labial, respectively.

"These letters, preceded as they are in this arrangement, by the liquids, lead us almost insensibly to the class of letters to be next noticed, namely, the *vowels*.

"These are so called, from having been supposed to relate to the *voice* alone.* This, however, is obviously an error. The different parts forming the mouth, or organ of *speech*, are not less necessary to the enunciation of the vowels, than to that of the consonants, or their function less appreciable, on carefully making the experiment. Thus, the French U is entirely labial the letter E is dental; O, palatal; whilst the diphthong AW, and the vowels marked in the French language by the circumflex, (^,) are guttural.

"Now let any one carefully examine the effort made by the stammerer in his attempts at the enunciation of these various letters. It will be obvious that the malady is but an exaggeration of the natural effort. In attempting to pronounce the letters of the first class, violent efforts are made, yet expiration—articulation—is not effected: but there is frequently, nay generally, a peculiar noise heard in the larynx, although its full enunciation is prevented by the action of the muscles of the mouth. But if the letters of the second class are pronounced [illegible] stammering, there is a perpetual hissing from the escape of compressed air, in the case of the letters F and V, between the lips, in that of the TH, between the tongue and upper teeth, and in that of the letters S and Z between the teeth. In the stammering enunciation of the letters of the third class, there is frequently a state of laborious respiration. In all these cases, then, it is plain that the larynx is open; any considerable effort applied to the parts concerned in the articulation of the first class of letters—the least noise—the least escape of air, alike demonstrate this fact. In the natural, and in the stammering articulation, there is the same total or partial interruption of the expiration, at the same parts, not of the larynx, but of the proper organs of articulation, only in different degrees. Let the larynx be really closed, which may be done after a little trial, and it will immediately be discovered that stammering is, in fact, impossible; the effort made by the force of the expired air against the parts of the mouth called into action in the articulation of the first class of letters—all escape of air—all noise, become totally interrupted

[illegible] just attentively watched the attempts of a stammerer to articulate the various letters.

"In the effort to pronounce the first class of letters, especially the letter T, still more if two T's come together, as in the words THAT TREE, the face became flushed even from interrupted expiration; yet there was, at every repetition of the effort, a noise audible in the larynx, proving that this part was unclosed.

"In pronouncing the letters of the second class, a repeated hissing noise was distinctly produced by the flow of the compressed air, in one case, (F, V,) between the under lip and upper teeth; in the second, (TH,) between the tongue and upper teeth; and in the third, (S, Z,) between the teeth.

"In attempting the articulation of some of the letters of the third and fourth classes, and of some of the vowels, the breath was sometimes lost, as it were, in a full and exhausting expiration, altogether peculiar.

* Blumenbachii Institutiones Physiologiæ, Ed. MDCCC

"All these results prove that the larynx is not closed in stammering, and indeed that its closure and stammering are totally incompatible with each other. When expiration is interrupted, it is by the cooperation, the coädaptation, of parts anterior to the larynx; it is, in a word, not an interruption in the organ of voice, but in that of speech. The paralysis of the laryngeal muscles could not, therefore, effect the good which Dr. Arnott ingeniously supposes.

"But would no evil really result from this paralysis of the muscles of the larynx? Would the 'loss of the faculty of closing the larynx' really 'be of no moment?' On the contrary, the accurate closure of the larynx, not by the epiglottis, but by means of its own muscles, is essential to the act of deglutition. This is demonstratively proved by M. Majendie, in his interesting memoir, 'Sur l'usage de l'Epiglotte dans la Deglutition.' The fact is further proved by cases of actual paralysis of the laryngeal muscles occurring in the human body, and by the effects of inflammation and contraction, and of ulceration of the internal parts of the larynx, in inducing defective deglutition."

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12. *Nature of Diseases.*—SERTUERNER, the celebrated chemist, has recently announced it as his opinion, that most diseases are owing to an inordinate acidity of the system, and accordingly proposes, for their prevention and removal, the free administration of alkaline remedies, especially carbonate of ... with calcined magnesia, mixed with sugar and mucilage.—*Hecker Annalen ... Annalen fur das Universal System der Elementi, Bd 3, H. 2.*

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13. *Cancer of the Stomach with Perforation.*—A case of chronic gastritis, which, as is too often the case, was mistaken for a spasmodic affection of the stomach, after being for a time apparently mitigated by the treatment, became suddenly much exasperated, and the patient sunk under the disease. On examination after death, a perforation of the stomach was discovered, surrounded by a thickened and callous condition of its tunics.—*Boe... Medic. und Chirurg. Beobachtungen*, 1829.

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14. *Rupture of the Spleen.*—An individual, aged about thirty ... years, of a choleric temperament, and irregular habits, received a blow by a hammer upon the left side, in the region of the lower false rib. Nothing remarkable was observed externally, but he experienced considerable depression and dyspnœa, which however seemed to be relieved by bleeding and internal antiphlogistic remedies. On the ninth day he was admitted into the hospital. At this time his countenance was pallid and sallow, his eyes dim, the respiration free, the fever urgent, the abdomen tumid and tender to the touch, and the bowels costive. Extreme prostration soon supervened, with great restlessness and wandering of intellect, and death on the fourth day after his admission. Examination of the body exposed a quantity of grumous blood extravasated in the cavity of the abdomen, and a rupture of the spleen.—*Ibid. B. C.* 3. *S.* 2.

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15. *Gaseous Tumours of the Uterus.*—Two very interesting cases of this description are related in the fourth volume of the *Opuscoli della Societá Medico-Chirurgica di Bologna.* As we have not received that work, we translate from the December No. of the *Revue Médicale* the following notice of them.

CASE I. A plethoric female, in the prime of life, being suddenly exposed to cold during menstruation, the discharge was suppressed. Acute pain in the region of the uterus was quickly induced, as well as a marked augmentation in the size of this organ, which reached to the umbilicus. The patient was unable to move her lower limbs, or even her body. To the chill with which the disease was ushered in, succeeded fever with exacerbations; in the evening there was thirst, and great uneasiness. On examination of the uterus, its tympanitic condition was easily ascertained. A large bleeding from the foot, emollient fomentations, enemata of chamomile and of elder, did not at all diminish the condition of the uterus, which even became rounder: leeches were

applied to the vulva with no more success. The symptoms constantly augmenting, another examination was instituted; the finger was introduced into the meatus uterinus, which gave issue to a quantity of fœtid gas The size of the hypogastrium diminished very sensibly, but soon again increased. Fumigations by means of a tube introduced into the uterus were then resorted to, which caused a very copious discharge of gas, accompanied with clots of blood, which continued several days, and produced a complete cure.

Case II. *Gaseous Tumour of the Uterus simulating Pregnancy.*—A woman, aged forty, who had never had any children, exhibited some signs of pregnancy. The menses, which had always previously been regular, were suppressed; the meatus uterinus was entirely closed; the patient did not however experience any of the disorders which attend pregnancy. The uterus, however, towards the fifth month was as high as the umbilicus, moreover its form could be distinguished by pressure with the hand. Such was the condition of this woman, when towards the sixth month all these prospects of pregnancy vanished—in stooping, a great discharge of flatus took place, the abdomen fell, and in a few days returned to its natural condition.

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16. *Sub-maxillary Tumour produced by a hog's bristle in the Canal of Wharton.*—M. Robert relates in the *Revue Médicale*, for August last, a case of this kind which occurred in a shoemaker. It was at first supposed to arise from a salivary calculus, but none could be discovered on sounding with a probe After some months suffering, the extremity of a bristle was discovered projecting into the mouth, and extracted, and in a week the swelling, pain, &c were dissipated.

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17. *Bloody sweat occurring during the Hysteric Paroxysm.*—M. Chauffard relates in the November No. of the *Transactions Médicales*, a curious case of a girl, aged [illegible], small, sanguineous, menstruating irregularly, brain but little developed, mind weak, idle and obstinate, addicted to contemplation—and who was persecuted by her parents for having abjured her religion. She fled her paternal mansion, and after seeking various asylums, was admitted into a hospital. She was at that time subject to hysteric attacks, manifested by general convulsions, exquisite sensibility of the pubic and hypogastric regions, &c. &c. When the attack was violent, and continued for twenty-four or thirty-six hours, the patient went into a sort of ecstacy, characterized by fixed eyes, loss of intelligence, &c. and a bloody sweat was poured out by the cheeks and epigastrium; the blood was in small drops, and stained the linen The whole cutaneous system was injected at the part which was the seat of the hæmorrhage, and the skin of this part was of a bright red, and covered with a vascular net-work. This phenomenon occurred whenever the hysteric catalepsy continued [illegible] long time or was exasperated by the impatience of the patient. The symptoms continued for three months, and then yielded to revulsive bleedings [illegible] revulsive topical applications.

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18. *Softening of the Right Optic Thalamus, with Paralysis of the whole of the left side of the Body.*—A case of this description is related in the tenth No. Vol. I. of the *Journal Universel et Hebdomadaire*. The subject was a girl, aged ten years, admitted, October 11th, into the Hôpital des Enfans, under the care of M. Guersent. There was complete paralysis of motion of the left side of the face, and of the superior and inferior extremities of the same side, the sensibility of these parts did not, however, appear altered. The intellectual faculties were not affected; there was intense head-ache. The patient died on the 2d of November. On post mortem examination, the whole right optic thalamus was found softened to the consistence of pap, and of the colour of coffee and milk mixed together. In the centre of the thalamus, two denser bodies of the size of a pea were found, apparently softened tubercles. The corpora striata and the other parts of the brain, did not exhibit any abnormal appear-

...ces. The spinal marrow was slightly softened: its membranes were healthy. This case does not support the views of certain physiologists, who maintain that paralysis of the lower limbs is dependent upon an affection of the corpora striata.

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10. *Small-pox Infection Communicated to the Fœtus in Utero without the Mother feeling any indisposition from its Action on her own Constitution.*—We published in our last No. p. 555, a case in which this very curious phenomenon occurred. Since the publication of that No. we have met with accounts of several cases in which a similar occurrence took place, so that it appears not to be quite so rare an event as our correspondent supposes. Dr. Edward Jenner relates in the first volume of the *Medico-Chirurgical Transactions* of London, two cases of this kind, and alludes to one mentioned by Dr. Mead, and he says that he is acquainted with more examples of a similar description. As this is an interesting pathological phenomenon, and as the work in which these cases are published is rarely to be met with in this country, we shall give a brief account of them.

The first case is related by Dr. Jenner. Dr. J. was requested by Dr. Croft to vaccinate an infant, and scarcely any effect being produced beyond a little efflorescence on the part, which in a few days disappeared, Dr. J. expressed his surprise, when the mother related to him the following particulars:—

"A few days previous to her confinement, she met a very disgusting object, whose face was covered with the small-pox. The smell and appearance of the poor creature affected her much at the time: and though she mentioned the circumstance on her return home, she had no idea that her infant could suffer from it, having had the small-pox herself when a child. During a few days after its birth, the little one seemed quite well, but on the fifth day it became indisposed, and on the seventh the small-pox appeared. The pustules, which were few in number, maturated completely. Dr. Croft, who attended her, being curious to know the effect of inoculation from one of the pustules, put some of the matter taken from one of them, into the hands of a gentleman eminently versed in that practice, which produced the disease correctly. Mrs. W. was not sensible of any indisposition herself from this exposure, nor had she any appearance of the small-pox."

The following case, similar in its general character, was communicated to Dr. J. by Mr. Henry Gervis. During the prevalence of a small-pox epidemic, Mr. Gervis vaccinated a woman in the last month of her pregnancy. "Her three children had been inoculated the preceding day with variolous matter by the surgeon who attended the poor of the parish, and who had very properly declined inoculating her also, from her particular situation. I made two punctures in each arm, each of which fortunately succeeded, and she regularly passed the disorder, complaining only on the tenth and eleventh days, when the areola was most extended, as is usual. I saw her very frequently during the progress of her disorder, and once or twice after its complete termination: I therefore can speak positively, that during that time she laboured under no symptom but what is connected with the cow-pox. From this period she continued perfectly well, and on Saturday last, the 11th instant, she was delivered of a female child, having at the time of its birth many eruptions on it, bearing much the appearance of small-pox in the early stage of the disease. This event happened five weeks after her vaccination, and one month after she had been exposed to the variolous infection of her own three children, and that of several other persons in the same village. On the 14th I visited the child again, when I found the eruptions had increased to some thousands, perfectly distinct, and their character well marked. Many among the most respectable physicians and surgeons from Totness, Ashburton, and the neighbourhood, were kind enough, at my request, to come to the poor woman's place of abode, and witness the fact. But to put the matter beyond all doubt, I armed some lancets with the virus, and produced the small-pox by inoculating with it. On the

18th the infant was seized with slight convulsions, and on the morning of the 19th, it expired."

The following case is related by Dr. Mead, in his discourse on small-pox. "A certain woman, who had formerly had the small-pox, and was now near her reckoning, attended her husband in the distemper. She went her full time, and was safely delivered of a dead child. It may be needless to observe, that she did not catch it on this occasion; but the dead body of the infant was a horrid sight, being all over covered with the pustules; a manifest sign that it died of the disease before it came into the world."

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20. *Case of Putrefactive Disorganization of the Lungs.* By ROBERT LAW, A. M., M. D.—John Dunne, tailor, aged nineteen, of a thin delicate habit of body, was admitted into Sir Patrick Dunn's Hospital for fever, in the progress of which he was seized with a profuse expectoration of fluid arterial blood, which he [illegible] had often had before his admission, his pulse was small and rapid. (R. [illegible] Camphoræ, ℥v.; Tinctur. digitalis, gutts. xxx.; Tinctur. opii, gutts. xx.; Syrupi, ℥ss. Misce sumat unciam omni trihorio.) The hæmoptysis ceased; in the course of the fever, he exhibited symptoms which gave strong grounds for suspecting effusion in the head, by becoming comatose, the pupils widely dilated did not obey the stimulus of light; these symptoms, however, yielded to the application of cold wash to the shaved head, a blister to the nape of the neck, and sinapisms to the feet; his febrile symptoms soon disappeared, but he complained of a teasing cough and palpitation of the heart, for which I repeated the camphor mixture and digitalis, with the following pills:—

R. Extract conii gr. viij.
Pilulæ ipecacuanhæ gr. iv. fiant pilulæ quatur una tertiis horis sumend.

These [illegible] ed [illegible] 't's action and the irritation of the cough, but he was much de[illegible] [illegible] pired much at night. I in consequence ordered bark and [illegible] tepid shower bath, from which he seemed to gain [illegible] of him for some time, when he came to me to compl[illegible] the uncea[illegible] tion of the cough; he was much emaciated and decidedly [illegible]; his [illegible] and expectoration were extremely fœtid; in all the right lung respiration could scarcely be heard; under the left clavicle was imperfect pectoriloquy; he died in two days from this; about six weeks since his first admission into hospital.

Examination fifteen hours after death; head not examined; the apex of the [illegible] lung adhered so firmly to the corresponding part of the cavity of the chest, [illegible] it could not be separated without breaking its structure; this lung was much heavier than natural, and felt quite solid, except at its base; the invest[illegible] [illegible] s universally thickened, and in some places had acquired the den[illegible] [illegible] cartilage. The entire substance of the lung, except the base, was [illegible] ded with tubercles; the pulmonary tissue surrounding these bodies [illegible] broken down into a soft brownish sloughy substance, or so condens[illegible] [illegible] ve its cellular nature quite destroyed; there were many irregular [illegible] versed by bands of pulmonary structure; the surface of each cavity [illegible] a blackish sloughy appearance; the base of the lung was quite free from [illegible] rcles, but was in the first stage of pneumonia.

[illegible] lung exhibited a sim[illegible] y disorganized condition, the small irregu[illegible] [illegible] were more numerous and the intervening pulmonary structure [illegible] esenting the same dirty, sloughy broken down appearance. On pur[illegible] [illegible] of the bronchial ramifications which opened into t[illegible] cavities, their [illegible] membrane was highly vascular, and, in some insta[illegible] k; the base of this lung, too, was in the first stage of pneumonia, and [illegible] n tubercles; the left cavity of the pleura contained about a pint of str[illegible] ured serum; the pericardium about eight ounces of the same fluid. [illegible] was also an infiltration into the sub-serous tissue, connecting the substance of the heart and the pericardium; the heart was small and flabby; the abdomen contained about two quarts of serum, all the viscera of this cavity were healthy.

We here have an instance of the disease, combined with tubercular phthisis, and, in consequence, running a much more rapid course, and exhibiting a more distinctly marked hectic fever, than the uncomplicated disease ordinarily does. As usual, it was ushered in by a profuse hæmorrhage, to which succeeded cough with fœtid expectoration; as in ordinary phthisis, the superior portion of the lung was the point de départ of the disease.

A striking circumstance in this case is, the effusion into all the serous cavities, which I suspect also took place into the brain, when the coma, dilated pupils, &c. gave evidence of its existence.—*Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, N. S. Vol. I.*

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21. *Hæmatemesis dependant upon disease of the Liver.* By Robert Law, A. M., M. B.—Mary Freyne, aged forty-three, married, four days since was suddenly seized with vomiting of blood, and had bloody discharges from the bowels, which continued up to the period of her admission into hospital. On the day on which she was admitted, she vomited not less than a quart of coagulated blood, and exhibited all the symptoms characteristic of such a loss; countenance pale and exsanguinous; lips livid; expression anxious; temperature of lower extremities below the natural state; surface of the body bedewed with cold clammy perspiration; pulse frequent and feeble; fluttering of the heart; voice faultering; (entrecoupée.)—(℞. Infusi rosæ, ℥v.; Sulphat. magnes. ʒvi.; Acid sulphuric dilut. ʒss.; Tinctur digitalis gutts. xxx. Misce, sumat unciam tertiis horis, vini rubri ℥vi. Legs to be wrapped in flannel; jars of hot water to be applied to the feet.)

November 28.—Vomited very little blood, but had frequent tarry discharges from the bowels; seemed quite exhausted; pulse very small and thready; surface of the body cold, countenance anxious; frequent sighing; all her symptoms bespoke approaching dissolution. Wine [illegible] to revive her, I substituted French brandy; she died in the course of the evening.

Examination fifteen hours after death; body not in the least emaciated; lungs quite healthy; heart soft, flabby and pale, containing a small quantity of fluid blood; a small quantity of serous fluid in the abdomen; the stomach contained about a pint of blood, and the intestines much of the black tarry matter which was discharged by the bowels. The entire tract of the gastro-intestinal mucous membrane so far from exhibiting any unusual vascularity, seemed quite blanched.

The liver presented an irregular tuberculated or granulated surface; was contracted in size; its anterior margin much less acute than natural. A section of it exhibited small round bodies of various dimensions, separated by dense fibro-cellular septa; this fibro-cellular tissue seemed to be the proper cellular tissue of the organ increased in density, furnishing loculi or capsules to these roundish bodies, which are probably the acini in a state of [illegible]rophy; these bodies adhered loosely to their capsules, and could [illegible] be detached from them; the consistence of the organ was greater th[illegible]; its colour a whitish grey.—*Ibid.*

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22. *Ossification of the Mitral and Aortic Valves, with Induration of the Tricuspid, Hypertrophy and Dilatation of both Auricles, Ventricles sound.*—The following case, related by Patrick Clinton in Vol. I. N. S. of the *Transactions of the Dublin College,* is particularly interesting, from the degree of ossification in the valves of the heart. Bertin says that in the course of 20 years' practice he never witnessed more than four cases of indurated tricuspid valves, and [illegible] has in general seen it to accompany a direct communication between the right and left cavities.

Ell[illegible] [illegible]inter, aged twenty-five, was visited on September 19, 1828. She was of a delicate constitution, and stated that she had often miscarried. She complained of dyspnœa, and frequent palpitations, sometimes so violent as to shake the whole bed; remained always in the sitting posture; enjoyed no sleep;

had a hard cough, with sometimes a bloody expectoration, and the feet were œdematous. The contractions of the ventricles were accompanied with a loud and distinct bruit de soufflet, which, on account of emaciation, was heard all over the anterior part of the chest. On the following day she was much relieved from the dyspnœa, had enjoyed some sleep, and was covered with perspiration, chiefly about the head and upper part of the body. She had taken gentle laxatives with tincture of digitalis. This latter medicine was continued, but with very little benefit; for on the next day the palpitation was very violent, but the noise of the heart not so loud. Its impulse was observed to be strongest between the third and fourth cartilages of the left side. Percussion gave but a dull sound in the region of the heart. The right arm was affected with severe pain from the shoulder to the tips of the fingers, and its colour had been livid in the earlier part of the day. She stated that four months ago she had been [illegible] with paralysis of the right side.

On [illegible] she enjoyed a considerable degree of ease; the pulse was much slower, [illegible] the impulse of the heart very considerable along the whole sternum. The sound of the ventricles was heard all over the anterior part of the chest. The heart's action was very irregular: the stroke of the ventricles very long, that of the auricles could hardly be distinguished, and there followed an intermission which was equal in duration to both. On the 25th the pulse was 100, and the beating of the heart less violent, but very irregular. First, there were two or three strokes with a long intermission between them, and then followed an equal or a greater number in rapid succession. The expectoration was this day less bloody, and the respiration was observed to be puerile under the left clavicle. The edge of the liver was felt for the first time below the navel. From this day until the 2d of October, she continued nearly in the same state, [illegible] benefit from the use of digitalis, which was exhibited under vari[illegible]. [illegible] latter period the legs were swelled up to the knees; the [illegible] was less; but the noise loud and peculiar. The contractio[illegible] accompanied with a noise which had some resemblan[illegible] the rolli[illegible]. The pronunciation of the word *thürla*, will convey [illegible] idea [illegible] sound, which accompanied their slow contractions. The sibilous rattle was heard wherever the respiration was audible. The urine was scanty, and the sputa less coloured with blood. She complained of a severe pain in the small of the back, which was aggravated by speaking or motion.

[illegible] 8th of October she was a good deal worse, the anasarcous swelling of th[illegible] undiminished, orthopnœa, palpitation and hæmoptysis, with paleness of [illegible] countenance. On the 10th and 11th the respiration was heard only at the upper part of [illegible] chest. She was obliged to sit up in bed constantly, and could hardly [illegible] but the functions of the brain continued undisturbed. She died at [illegible] M. with extraordinary efforts of the respiratory muscles.

[illegible] *of the Body.*—The extremities were anasarcous. [illegible] liver was [illegible] and very hard; its external surface appearing as if minute grains [illegible] imbedded in it. These grains were closely set, and so numerous [illegible] most the whole surface of the liver. The right lung adhered to [illegible] pleura costalis. There was no water in either pleura. The pericardium [illegible] distended by a large quantity, ([illegible] quart or more,) of a greenish-yellow trans[illegible] with a very few flakes of soft lymph floating through it. The [illegible] ally the auricular portion, was distended by a quantity [illegible] clotted [illegible] mitral valves were so much ossified, that the passage fr[illegible] left auricle [illegible] the left ventricle, was reduced to a mere chink, of a [illegible] somewhat semi[illegible]cular, large enough to admit the blade of an ordinary [illegible] but not so large as to admit the handle. This form and size of the a[illegible] ventricular opening was produced by the complete ossification of th[illegible]posing valves, which stood up from their bases, (on which they were quite immoveable,) and projected forwards towards each other so as almost to meet, and in part of their length actually to meet each other. The edges of the valves were

very irregular and nodulated, and so much thickened, that the passage between them from the auricle into the ventricle was of considerable length. There was a good deal of ossification under the lining membrane of the parts in the immediate vicinity of the valves. The columnæ carneæ and chordæ tendineæ were thicker and stronger than usual. The auricle was thickened in its parietes, presenting, in some places, a muscular layer of a quarter of an inch in thickness, its cavity was so much enlarged, as nearly to admit a closed hand. The ventricle was in the natural state. On looking from the aorta towards the ventricle, the aortic valves were seen standing up, so as nearly to close the passage, but still leaving an opening between their edges, large enough to admit a small pea. When the point of the little finger was applied to the opening on the side of the ventricles, and a slight pressure used, the valves yielded so as to allow the point of the finger to enter the aorta, and the opening to increase to about twice its former magnitude, the valves at the same time closely embracing, and pressing upon the finger with an elastic force. On withdrawing the finger the valves returned immediately by their elasticity to their former situation, and the opening was reduced to its former size. The ossification of these valves was very imperfect, but they were considerably thickened. There were two or three minute points of ossification in the aorta, at about the distance of an inch from the heart. The tricuspid valves were also thickened and imperfectly ossified, and stood up a little from the sides of the ventricle. The right ventricle, and the valves of the pulmonary artery were quite healthy: the right auricle thickened and enlarged, but not so much as the left. There was no appearance of unusual vascularity, or of false membrane on any part of the heart. The lungs were not cut into; externally they appeared sound.—*Ibid.*

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25. *Case of Attempt at Suicide, with Danger of Suffocation by the Falling Down of the Epiglottis.* By JOHN HOUSTON, Esq.—In March, 18[illegible], a servant out of place, residing in Duke street, during a fit of delirium brought on by intoxication, attempted to destroy himself by cutting his throat with a razor. I saw him in about ten minutes after, and found him almost lifeless. The pulsations of the heart were imperceptible, the pulse at the wrist had ceased to beat, the limbs were cold, and all feeling and consciousness lost. The wound, which was frightfully deep, extended more towards the left than the right ear. The razor had entered between the os hyoides and the thyroid cartilage, and disunited them so completely as to allow the former to ascend with the tongue into the mouth. The pharynx was laid wide open, and the epiglottis severed from its attachments to the tongue and os hyoides, and left hanging by its pedicle to the back of the pomum adami. The carotids had escaped untouched, and the bleeding was inconsiderable. It appeared difficult at the moment to account for the sudden extinction of life; the symptoms were evidently those of suffocation, but the cause was not at first understood. I passed my finger into the wound, and found, to my surprise, that the epiglottis, loosened from its upper and lateral attachments, had fallen back over the rima glottidis, and completely intercepted the passage of air to the lungs. I raised the obstructing body and drew it forwards: the chest soon after began to heave, respiration returned, the heart and pulse again beat, and consciousness and sensibility were re-established.

It required some effort of my fingers to hold up the epiglottis, as the air at every inspiration tended to force it back again to its unnatural and dangerous position.

While I was occupied with the patient, Surgeon Porter entered the room; I explained to him the singular nature of the case, and how between my fingers and thumb I held the regulation of the man's life or death. The top of the epiglottis was then brought over the edge of the thyroid cartilage, and secured to its anterior surface by a single stitch. The man in a short time sat up and attempted to speak, but was unable to articulate. He was taken into the Meath Hospital under the care of Mr. Porter, from whom I learned that he never re-

covered from the delirium which led to the perpetration of the act, and died in about a week after, of erysipelatous inflammation of the neck and throat.

The circumstance which had so nearly extinguished the life of this individual the instant after the wound was inflicted, is too plain to require comment; but the fact of its occurrence, and of the facility with which the immediate danger arising from it may be averted, is too important not to be made generally known. A respite of life for even a few hours in cases such as this, may be often of infinite value.*—*Dublin Hospital Reports, Vol. V.*

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24. *Internal Strangulation of the Bowels after Parturition.* By John Houston, Esq.—A lady about 28 years of age, and the mother of several healthy children, to all of whom she had given birth without any untoward symptoms, was delivered of a healthy boy, her last child.

During her pregnancy she had experienced no unusual inconvenience, but immediately after the birth of the infant she complained of severe pain in the abdomen, which became violently aggravated on the placenta being discharged. No evacuations could be procured from the bowels, the belly became swollen and tense, and the pulse remarkably quick and small. She sunk rapidly under symptoms of the most acute peritonitis, and notwithstanding the most energetic treatment, expired in about thirty-four hours from the time of delivery.

Dissection.—The uterus had contracted, and nearly retired into the pelvis. The entire peritoneal surface exhibited all the marks of intense inflammation, and the ileum, to the extent of about three feet, was completely sphacelated, black, and filled with blood. A band of lymph, two inches long, and of considerable thickness and solidity, was attached by one end to the right ovarium and fallopian tube, and by the other formed a tight noose around the mesentery of the mortified gut, which thoroughly strangulated and deprived it of circulation. The extravasation of blood, which had taken place into the cavity of the intestines, and among [illegible], marks the tightness of the ligature.

It would appear, from the absence of any disagreeable symptoms during pregnancy, and the rapidity and violence with which they followed the birth of the infant, aggravated still more after the discharge of the placenta, that the adhesion between the ovarium and mesentery had been contracted while the uterus was high in the abdomen, *and that the descent of that organ after parturition drew tight the band which strangulated the bowels.*—*Ibid.*

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[illegible] *Case of rupture of a vessel in the Brain from a shock.* By Charles Bell, Esq.—[illegible] young woman, carrying in her arms her first child, about six months old, slipped her foot, with a slight shock, but it was on plain and even ground, and she did not fall down. In the instant of this shock she was sensible of a sudden pain in the right side of her head; it was so peculiar that she said she could cover the [illegible] with her finger, and though slighter at intervals, this pain never left her [illegible] moment of her death. She walked home, went about her little [illegible], suckled her child, but was seized that evening with sickness, [illegible] like that of any sudden disease, but rather like the easy vomiting [illegible] pregnant woman.

"She continued very sick, with slight head-ache; but still was out of bed all [illegible] long, [illegible] about her household affairs, and had no symptom which could [illegible] suspect her very dangerous condition, or what a dreadful accident [illegible]ppened. She got up during the night after this accident for [illegible] cool [illegible] felt herself extremely giddy, was obliged to support herself [illegible] chest of drawers, which stood by her bed-side, and went to bed again [illegible]ely. On the evening of the second day she got out of bed, made tea [illegible] was out of bed during the evening, had no complaint, except the contin[illegible]ness,

* Since the report of this case, I have observed in Blandin's Traite d'Anatomie Topographique the following paragraph, which shows that if the accident alluded to has escaped notice, the possibility of its occurrence has been at least contemplated. He says, "L'epiglotte neanmoins, qui est alors coupee, peut par son abaissement sur le larynx causer des graves accidens."

slight pain of the head, and giddiness still slighter. That night she expired. Her pulse all along had beat low and weak, and never more than sixty in a minute.

"When I was brought to open the body, I heard nothing of the pain of her head, though it was fixed and constant, and without that nothing could be more puzzling than this combination of circumstances. First the sudden slipping of her foot, and the incessant sickness which ensued, suggested the idea of hernia, but no such secret was known among her relations, and upon opening the abdomen, no hernia was found, neither open nor concealed, as in the thyroid hole.

"Next we were informed of a palpitation which had been usual with her. It appeared that she had complained chiefly about the period of her first menstruation, and before marriage. It seemed to be hysterical merely, but upon opening the thorax, we found the heart wonderfully enlarged and crammed with dark and grumous blood.

"But next a new scene opened upon us, and this enlargement of the heart appeared to arise like that of the liver, which so often accompanies fractured skull, from the languid action of the heart and torpor of all the system in those who lie even for a few days comatose. Now for the first time I was informed that the shock of slipping her foot had caused a sudden pain of her head: that it was pointed, confined to one single spot, incessant, accompanied with vomiting or desire to vomit, and with giddiness during the night.

"Upon opening the head I found the dura mater of a most singular appearance, livid, or rather like the gizzard of a fowl, with green and changing colours. Having cut it open, the pia mater appeared like red currant jelly, with fresh coagulated blood so firmly attached to it, that it seemed as if driven into its very substance and incorporated with it. Upon cutting and tearing open the pia mater, each convolution of the brain was surrounded and separated from that next it by coagulated blood. Upon cutting into the ventricles of the brain, that of the right side was found to contain four ounces of entire and coagulated blood; the cavity at first view was like opening a ventricle of the heart: the blood, very dark, and firmly coagulated, was forced out by the pressure of the surrounding parts, the coagulum became gradually firmer and whiter, till it turned to a very firm stringy clot, which stuck in the mouth of the middle artery of the brain. Being carefully examined, it was found to be sticking firm in the mouth of the artery which had burst, as if by the separation of two of its rings. The blood which thus filled the right ventricle had also made its way down in prodigious quantity into the third and fourth ventricles, quite into the occipital hole, but the opposite ventricle it had not filled."

MATERIA MEDICA.

20. *Salicine.*—This article, which has lately been introduced into the materia medica, is thus described by MM Pelouze and Jules Gay Lussac. Salicine, when pure, forms white crystalline prismatic needles. It has a bitter taste, and somewhat of the odour of willow bark. One hundred parts of water dissolve 5.6 parts of salicine at 67° F.: at 212° F. it appears to dissolve in any proportion. It is equally soluble in alcohol, but ether and oil of turpentine take up no portion of it. Concentrated sulphuric acid gives it a fine red colour, like that of bichromate of potassa. Muriatic and nitric acids dissolve it without producing any colour. It is not precipitated from its solution by infusion of nut-galls, gelatine, neutral or sub-acetate of lead, alum, or emetic tartar. It does not saturate lime-water when boiled with it in excess it does not dissolve oxide of lead: it fuses a little above 212° F., losing no water, and crystallizes on cooling. If the heat be rather higher, it acquires a lemon-yellow colour, and becomes, when cold, brittle as resin.

Salicine, burnt by means of oxide of copper, yields a gas entirely absorbable by potash. The mean of two analyses gave the following as its composition.

Carbon . .	55.491 = 2.028	proportions.
Hydrogen .	8.184 = 2.004	"
Oxygen . .	36.325 = 1.000	"

Its composition may, therefore, be represented by two volumes of olefiant gas and one volume of oxygen.—*Ann. de Chimie, Vol. XLIV.*

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27. *Ætherous Extract of the Semen Santonici as a Vermifuge.*—The seeds and stems of the Semen santonici have long been employed for the purpose of destroying worms, but the difficulty experienced in taking it in form of powder has been so great, that it has been much less employed in modern times than formerly. Jehn, an intelligent apothecary of Germany, has succeeded in obtaining a preparation of this substance free from the objections which have hitherto existed, and which has proved a most efficient anthelmintic in the hands of several distinguished practitioners. It is prepared as follows —Digest four ounces of the seeds, previously bruised, in sixteen ounces of sulph æther, for three or four days, frequently shaking the mixture: then draw off one-fifth part of the æther by distillation, and bring the residue to the consistence of an extract, by digesting it in a sand bath, with a very moderate heat It is of a dark-brown colour, having the odour of the seeds, is bitter to the taste, and dissolves readily in æther and alcohol, but not in water. It is administered to children from one to two or three years, in doses of from one to three grains; above this age, four or five grains, and to adults, ten grains.—*Journal für Practischen Heilkunde. von Hufeland and Osann, LXX Band.* 1 *Stuck.* 1830.

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28. *The Ointment of Mezereon as a Dressing to Maintain a Permanent Discharge from Issues.*—It is well known that in many cases, where the unguent. cantharid. is employed as a dressing to a denuded surface, strangury is developed, and occasions the patient much distress. To obviate this inconvenience, Professor Hufeland has proposed to substitute the unguent. mezerei, which he thinks possesses many advantages over the other. The following is the formula which he recommends for its preparation:—℞. extract spirituous. cort. mezerei, ʒj.; axung. porc. ℥ix., ceræ. alb. ℥j.; salve extr. in unc. und alcoholis, adde axungiam et ceram et misce modico calore continue agitando usque ad perfectam evaporationem alcoholis: tunc cole.—*Journal der Practischen Heilkunde, Band.* 70, *Stuck.* 1.

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29. *New Styptic.*—M. Bonafous has communicated to the Royal Academy of Medicine, that he has succeeded with a powder composed of equal parts of rosin, carbon, and gum arabic, in arresting hæmorrhage from large arteries The author related several cases in which its application to the wounded brachial artery, to leech bites, to the carotid artery of a horse, &c. had entirely arrested the flow of blood.—*Gazette Medicale, Feb.* 1831

PRACTICE OF MEDICINE.

30. *Chronic Gastritis.*—The following case, with the accompanying remarks, are from a clinical lecture delivered at St. Thomas's Hospital in December last by Dr. Elliotson, one of the most judicious and sensible practitioners of London, and we solicit for them an attentive perusal. The accordance of his observations with the doctrines so often advocated in this Journal will be observed, and although we may not be prepared to admit with Dr. Elliotson that these doctrines have been long prevalent in Great Britain, yet we consider this of little importance, so that their utility and correctness be admitted

Mary Harrison was admitted on the 7th of October, ætat. fifty: she had been ill two months. The symptoms were constant, and great pain under the region of the heart, which was exceedingly increased on pressure. It appeared to be situated in the splenic half of the stomach. There was constant nausea, and a great discharge of fluid from the throat, and she had spit up two or three times dark clots, apparently of blood, and such clots had frequently passed from the rectum. In the book it is said she feels well, and is nauseated as soon as she eats; there is constant heat of the epigastrium, constant heat up the throat, and ... bad taste in the mouth, no appetite, great heat of the whole body, especially at night: cheeks flushed, scalding pain in the stomach as soon as she takes wine or any other kind of stimulant. These were the symptoms, and nothing could more decidedly show an inflammation of the stomach. Here was in the first place, pain in the region of the stomach; this pain was constant, was ... on pressure and on taking any sort of stimuli. There was also great ... great heat in the stomach, and this sense of heat amounted to scalding, ... was increased by wine or any other kind of stimulant. Then there was ... secretion going on there, for her mouth was constantly filled with ... she frequently discharged a large quantity of thin liquid, and now and then ... blood came away, which is a common thing from any affection of a ... membrane; not that there was any extent of it—it was only a few dark ... Besides these local symptoms of inflammation, there were general symptoms. There was great heat, and the face was flushed, she was very ... and her pulse was 9 . Besides these general and local symptoms of inflammation, there was a disturbed state of the stomach, anorexia, and nausea ... as she took her food, and vomiting of these dark clots which came to ... You know that one of the sets of symptoms in inflammation is that ... from disturbed function of the affected organ. She was also emaciated, ... her bowels were so costive, that frequently she had not a stool for a whole week. Costiveness is not an uncommon symptom in any inflammation, and it ... frequently occurs where the stomach is inflamed.

Now this is a sort of case which you will see almost every day. You will have people come, saying that they have indigestion, and upon inquiry you will find that there is tenderness on pressure upon the stomach, and pain increased as soon as they take wine or brandy, or any thing of that description, and notwithstanding that, they go on eating and drinking, and taking stimulants.

I found it impossible to say whether this woman was labouring under simply chronic inflammation of the stomach, or whether there was united with ... disease. It was impossible for me to say whether there might not be ... in some parts of the stomach—whether there might not be some fungous growth beginning, as well as an inflammation around it—or whether there might not also be an ulcer in the stomach. Unless you can feel induration—unless there is repeated hæmorrhage, and a peculiar sallow hue of the complexion—unless you can feel enlargement, it is quite impossible in these cases to say with any certainty, that there is any thing more than common inflammation.

The treatment, however, is to be that simply of chronic inflammation. If there be organic disease, you will not cure it, and, if not shown distinctly to exist, you must proceed upon the hope that there is nothing more than chronic inflammation. If there be organic disease, there may be much inflammation of course around it, and though you will not lessen the organic disease by the ... mediate inflammation, you will lessen the amount of suffering. There are so many cases of disease thought to be organic, which are nothing more than chronic inflammation, that in every instance, unless there be evidence to the contrary, we are to act upon the hope that there is no organic disease, and, by so acting we may cure a considerable number. This woman was in a state of great emaciation, and therefore, I confess, I feared the worst—that there was probably something more than chronic gastritis. I set to work, however, upon the presumption that there was mere inflammation. She took not a grain of

medicine during the whole time she was in the hospital. [illegible]elve leeches were applied to that part of the epigastrium where there [illegible] greatest pain—the left side, and these were repeated every day; and, as [illegible] as they came off, poultice was applied, in order that as much blood as [illegible] might be obtained. Besides, a poultice was regularly applied twice a day, so that she had the benefit of a constant local warm bath over the stomach. On account, however, of her extreme constipation, it was necessary to attend to the state of her bowels; such a state could not be healthy, and would ce[illegible]y exert an influence upon the state of the stomach, and therefore she ha[illegible]ily clyster. Had I given her medicine by the mouth, it would have irritated the stomach, have increased the inflammation, and I might have failed in opening her bowels, in consequence of its being sent up again, and not allowed by the organ to pass the pylorus. She had a clyster every day, twelve leeches were applied, and she was allowed nothing but diluents; milk she could not take; of barley water she grew tired, and she was restricted at last to weak beef tea, and of that she took but little. By these means, without any deviation whatever—without an addition being made to them on the one hand, or there being any cessation of them upon the other—though she was only admitted on the 7th of October, so debilitated that she could scarcely turn in bed, and lay principally on her back, she was discharged perfectly well on the 25th of November, having stayed in the house some time in a state of convalescence—about seven weeks in the whole. The leeches were applied till they seemed to be exhausting her—till the tenderness and the heat were diminished, and then they were discontinued. They were applied daily from the 7th of October to the 19th [illegible] that month, and from that time they were applied every other day till the [illegible] of October, when they were no further required. The clysters were diminished in the same proportion—that is to say, for two or three weeks they were employed every day, and after that period every other day, and then once or twice a week, till the bowels came into a perfectly regular state. Towards the end of October, she was so freed from inflammatory symptoms, but yet so debilitated and so hungry, that I allowed her meat. She took one mutton chop from the [illegible] of October every other day, and from that time she was able to sit up, and gradually recovered, and went away expressing the greatest gratitude, saying that her life had been saved. I do not know whether that was the case, but her disease was cured under the means employed."

I believe that till of late, the nature of these cases was not sufficiently attended to. When persons vomited, and complained of a pain in the stomach, a [illegible] number of practitioners gave aromatics and stimulants of various kinds. In France this was undoubtedly the general case until the time of Broussais, a celebrated physician now practising there. The treatment consisted in what they called antispasmodics. Sometimes not only cases of inflammation of the stomach, but of the head and various parts of the abdomen, and sometimes of the c[illegible]re thought diseases of debility, and to require s[illegible]lants and [illegible]nd antispasmodics. Sti[illegible]ants and narcotics of all kinds were [illegible]

[illegible] Broussais must have rendered incalculable benefit to his coun[illegible]en, [illegible] not think that we are indebted to him for a change of practice in [illegible] cou[illegible] for it had been previously introduced. I know that when I was [illegible]dent it was the custom to attend to these things, though perhaps not to [illegible] an extent as at the present day. The state of the abdomen was [illegible]ined, [illegible] abdominal aff[illegible]s, to see whether there was inflammatio[illegible]; and it was the custom to [illegible] all inflammatory affections of the abd[illegible] anti[illegible]logistic treatment [illegible] learned the practical part of my pro[illegible]. Perhaps I [illegible]icularly fortunate, and enjoyed an advantage over [illegible]ary of my [illegible]poraries, in study[illegible] under the practice of Dr. J[illegible] Curry, at Guy's [illegible]tal. He had been [illegible] practitioner in India; he had practised in the navy, [illegible]d seen a great deal of the necessity of looking out for inflammation, and treating it by antiphlogistic means, general and local. It was his

custom in almost every case to turn down the bed-clothes, or put his hand under them, and press the abdomen, especially in cases of fever, but in a large number of diseases also, I soon saw that he was right; and wherever the patient complained of pain, he took away blood locally. He had a particular idea respecting the liver, and therefore he applied cupping-glasses continually to the right hypochondrium and epigastrium, where the pain was generally seated. There can be no doubt that many of his opinions respecting the seat of inflammation were absurd; he ascribed all to the liver, and seldom thought of inflammation of the stomach and intestines. He ascribed almost all the affections of the abdomen to the liver. His fault consisted in localizing too much, and in speaking, not of the abdomen at large, but of the liver, and there can be no doubt that he gave mercury more extensively than was necessary. I believe that at that time it was not so much the custom generally to attend to the inflammatory state of the abdomen in fever and other diseases as was the custom with him, but those who saw his practice, my fellow students and myself, got into the way of attending to it; and I have no doubt that the number who attended his lectures, (which, of course, was far more than attended his practice,) are throughout this country practising successfully through the good instruction they derived from him. We saw his errors, but we learned great good; and to me, therefore, when I see what the French do, and how their opinions are changed in the practice they adopt, there is nothing new. It was perfectly familiar to me, and had been for many years; and, in fact, I never read any thing of Broussais till very lately; and when he is right—and he is unquestionably as extravagant in his way as Dr. Curry was in his—I cannot say that what he advances is new to me, I mean the importance of searching out for abdominal inflammation, and treating it as inflammation, at the same time, that it is not new to me, is owing to my instruction from Dr. Curry. The French have an idea that we are not conversant at all with the frequency of abdominal inflammation, they do not imagine that so many diseases are treated in this country by taking away blood locally and generally. I know that a great many books are written in England as well as in France, containing erroneous notions of practice; I know that many persons have taken the lead in practice in England who have been but bad practitioners, because extent of practice does not show a man's knowledge or skill, but merely his assiduity and knowledge of mankind; but notwithstanding that, I am satisfied that in this country there has been for many years a large number of practitioners, especially those who studied at Guy's Hospital, who have been pursuing their avocations in this rational, sound, and, I must add, very successful way. The French read many books published in this country, which contain erroneous ideas, and hence they are led to fancy that our practice is universally erroneous—that we have no idea of inflammation occurring so frequently as they know to be the case; but notwithstanding that, I am quite satisfied that in no country is the frequent occurrence of inflammation recognised more than in England, nor are diseases treated on a more antiphlogistic plan. Although still there may be many practitioners who do not practise in this sound rational way, particularly those who say they are of the old school, (and, after a time, we are all of the old school, and are displaced by those who come after us and know more,) I must think that we do consider diseases in this country to be inflammatory as much as is done in any other, and we do adopt antiphlogistic treatment to as proper an extent.

To return to the case of the woman: had the inflammation been seated any where besides the stomach, I should have assisted the leeches by the application of medicines; but as that was the part to which all the medicines must have been applied, I trusted altogether to the leeches, lest I should irritate the organ. [illegible] what I know to the contrary, calomel might have passed through the stomach without irritating it; but still it might not. I trusted that the inflammation of the stomach, chronic as it [illegible] would give way to the leeches, the clysters, and low diet; and I did not think it right to run the risk of disturbing their operation by any medicine. It is possible that by calomel I might

have got her mouth tender, and the inflammation would have been subdued much sooner; but still, whether it would have locally irritated the stomach by its presence, is a point on which I cannot speak with certainty. The case was one of great interest, from the severity with which it showed itself when she first came to the hospital—on account of the gradual decline of the symptoms—the perseverance in one line of treatment, and the perfect recovery of the woman before she left us.

It is common for patients to say that they feel a great sinking—that they must have food; and then their friends call upon them, and for the purpose of looking amiable, whisper in their ear, "never mind what the doctor says, you will be better if you take a glass of wine—come, one glass can't hurt you." I have continually have I been sent for, after having taken the utmost trouble in a case, and brought it nearly to a conclusion, merely from the circumstance of a person having taken a glass or two of wine, and thus brought back all the irritation of the stomach, and even if they neglect the strict rules of diet too soon—if they merely eat meat like other people—it will often bring them back to the state in which they were at first. These cases are so common, and it is so common practice for persons to take full diet and aromatic medicines in these cases, that I am very anxious that the present case should make an impression upon you.

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31. *Paralysis Agitans.*—This disease is so imperceptible in its approaches that the precise periods of its commencement is seldom recollected by the patient. A slight sense of weakness, with a proneness to trembling, sometimes in the head, but most commonly in the hands or arms, are the first symptoms noticed. These affections gradually increase, and, at the period perhaps of twelve months from their first being observed, the patient, particularly while walking, bends himself forward. Soon after this, his legs suffer similar agitation, and loss of power with the hands and arms.

As the disease advances, the limbs become less and less capable of executing the dictates of the will, while the unhappy sufferer seldom experiences even a few minutes suspension of the tremulous agitation; and should it be stopped in one limb, by a sudden change of posture, it soon makes its appearance in another. Walking, as it diverts his attention from unpleasant reflections, is a mode of exercise to which the patient is in general very partial. Of this temporary mitigation of suffering, however, he is soon deprived. When he attempts to advance, he is thrown on the toes and fore part of his feet, and impelled, unwillingly, to adopt a running pace; is in danger of falling on his face at every step. In the more advanced stage of the disease, the tremulous motions of the limbs occur during sleep, and augment in violence until they awaken the patient in much agitation and alarm. The power of conveying the food to the mouth is impeded, so that he must submit to be fed by others. The torpid bowels require stimulating medicine to excite them into action. Mechanical aid is often necessary to remove the fæces from the rectum. The trunk is permanently bowed. Muscular power is diminished. Mastication and deglutition are difficult; and the saliva constantly dribbles from the mouth. The agitation now becomes more vehement and constant; and when exhausted nature seizes a small portion of sleep, its violence is such as to shake the whole room. The chin is almost immoveably bent down upon the sternum, the power of articulation is lost; the urine and fæces are discharged involuntarily; and coma, with slight delirium, closes the scene.

In a clinical lecture lately delivered by Dr. Elliotson, at St. Thomas's Hospital, a case of this description is introduced as a hook on which to hang some practical and pathological remarks—the case is as follows.—

"The patient, F. E., is thirty-eight years of age, and has had the disease eighteen months. He has been accustomed to drink hard at different periods of his life. He is a school-master by profession. It is the right upper extremity which is now affected; but though the right lower extremity is not in agi-

tation, it is occasionally retracted as he walks, experiences solitary catchings, though it does not shake. The disease began in the head and tongue, but when the right upper extremity was affected, it left the head. This peculiarity distinguishes the present case, that the tongue is one of the parts that were first affected. In general this is not the case, and the tongue is not affected, after many other parts have suffered severely. The head now shakes very slightly only. The affection of the tongue is attended by the following very curious result. Whenever the man attempts to speak, the tongue begins to quiver like the tongue of a serpent: presently a confused murmur is heard and then suddenly he brings out his words with extreme rapidity; and such is the effort that he cannot stop himself, but repeats the few last words again and again. It is a phenomenon analogous to the running which occurs on the attempt to walk. He cannot manage the muscles at all, without a violent effort, such an effort that his tongue gets, as it were, into a run; the common expression of the tongue running, when we describe a person who makes a good use of it, is really applicable to this patient. I have written down in the case book. 'Before he can speak he makes a confused and inarticulate murmur, and then speaks rapidly, slurring his words together, and repeating the last words several times. The effort makes the tongue and right upper extremity shake violently.' He sleeps very well, his appetite is good, and in all other respects, except this shaking of the body, he is in tolerable health. Sometimes after a good night's rest he does not shake at all for a few minutes after waking in the morning, but then it is not long before the trembling commences. Any excitement or attempt to do any thing at once, greatly increases the tremors but by a strong effort he can at length arrest them for a few moments. The only other symptom present is costiveness, (he has but two stools a week, and a pain in the head whenever he is anxious."

Dr. Elliotson informs us that, in many cases, the disease is controllable by art—it ceases on active treatment. In young persons he has often cured it—and, in such cases, there has been great constipation. It has so happened that all the people we have seen affected with this complaint, have been advanced in life, and therefore our practice has not been so successful as that of Dr. Elliotson yet we have sometimes seen considerable relief produced by medicine. One of the patients now under our care, a music-seller on Holborn hill, came under our observation about five months ago, and was then so ill that we entertained no hope of doing any good. Regular aperients were prescribed, together with colchicum and bitters. We heard no more of him till within these few weeks, when, being summoned to him, we found him in nearly the same state as on our first visit. But we were rather surprised to learn that, soon after he commenced the remedies above-mentioned, he got so much better that he almost daily went out—sometimes as far as Hampstead. This man has an insatiable appetite, and the indulgence of this appetite has, no doubt, an injurious effect on the complaint. We shall introduce the following remarks of Dr. Elliotson on the treatment.

"If we can ascertain that there is any fulness in any part of the nervous system, or any inflammation, the treatment should consist in bleeding locally or generally, or both—in purging and mercurializing—in employing setons, issues, moxas, &c. If there be nothing of this kind—if there be no reason to suspect fulness, or inflammation—if the patient be not of a plethoric habit, and no local pain nor tenderness be felt, then such treatment is, for the most part inefficacious. I would, therefore, not have recourse to treatment of this description, unless there was a plethoric habit, or evident marks of inflammation, or fulness in some part of the nervous system; or unless there had been some injury the effect of which we should necessarily suppose to be chronic inflammation. Almost all nervous diseases, whether convulsive, spasmodic, or paralytic, may arise from, or be dependent upon, inflammation or congestion, or upon some peculiar state which we do not understand. I know of no mode of distinguishing these varieties of the disease, except what I have already pointed out

When we cannot ascertain that the disease has arisen from mechanical [illegible] and there is no local pain or tenderness, or fulness of the system, stimulants, tonics, electricity, the shower bath, and various [illegible]—the operation of which we do not understand—iron, sulphate of zinc, copper, nitrate of silver, and in short, all those minerals which belong to a class of remedies, each of which do good, and has a peculiar operation on the nervous system, distinct from that of narcotics, perfectly inexplicable—often prove efficacious in this and all other convulsive, spasmodic, and paralytic diseases. The present patient appears to have been both in the St George's and Middlesex Hospitals, and from what I have learned of his previous treatment, I have [illegible] the plan which he is now undergoing. I find that, very rationally and [illegible] St. George's Hospital he had been cupped and bled frequently [illegible] irritation had been produced by means of blisters, so that a copious [illegible] was kept up from the back of the head and neck; and that he had [illegible] on low diet. The plan which it was reasonable to pursue in such [illegible] where the patient was in the prime of life, the habit full, and a blow had occurred—this general and local antiphlogistic treatment, which is often successful in nervous diseases, was fully pursued, but in vain. I find likewise [illegible] the Middlesex Hospital, it having been ascertained that these [illegible] proved unsuccessful after full trial, stimulants and tonics were adm[illegible] him—porter, good nourishment, camphor, and various stimulant [illegible] although these did not cure him, this mode of treatment was as [illegible] after the former, as the former was in the first instance. As he was [illegible] habit, the treatment began with antiphlogistic means, and in failure [illegible] recourse was had to stimulants. Among the various remedies which [illegible] in the diversified diseases of the nervous system, I believe the most [illegible] and at the same time the most safe, is *iron*. Upon the whole, I have succ[illegible] better with that than with any others, though in epilepsy it rarely does [illegible] I have been much more successful in the treatment of St. Vitus's dance [illegible] iron than with any other internal mineral remedies, although their efficacy can not be doubted. It is far less nauseating and griping than [illegible] does [illegible] produce the same inconveniences that arise from arsenic, nor the sickness which results from sulphate of zinc, nor does it produce that blackness of skin which is the effect of nitrate of silver, and the chance of which makes me always unwilling to employ it. Knowing, therefore, the treatment which the patient had previously undergone, and hearing from him that he was always better the more he was strengthened, I ordered him two drachms of sub-carbonate of iron three times a day, and a pint of porter at dinner. He is a super[illegible] sort of man, and very desirous of recovery, and I do not imagine that he would deceive me by telling me he was better for invigorating measures, if he were not. It is certainly necessary to remedy the state of costiveness under which he labours, but I do not suppose that purging would cure his disease, though I am perfectly aware that, where there is congestion or inflammation, or an ap[illegible] proach [illegible] purging frequently does cure patients with various nervous [illegible] [illegible] on the whole, I really have been disappointed in the use of [illegible] [illegible] though I acknowledge their value in various diseases of the [illegible] system. If there be no reason in this case to suppose congestion or inflammation, still the bowels are costive, and that is a state to be remedied [illegible] [illegible] must make the disease worse. Under these circumstances, I have [illegible] [illegible] him to take half a minim of croton oil daily, in order to keep his bowels [illegible] open; for though purging him may do him no good, and by debilitating would probably make [illegible] worse, yet constipation will be sure to [illegible] harm. There is another reason also why costiveness should be obviated [illegible] the iron would be liable to accumulate in the alimentary canal. The [illegible] is a bulky remedy, and if any deficiency of the alvine discharge o[illegible] will, of course, accumulate. I usually administer it in treacle, because [illegible] has a tendency to keep the bowels open."

Dr. Elliotson cautions us against confounding paralysis agitans with the tre

mulous agitation of drunkards. The latter generally affects both hands, and commences or increases on any muscular effort. In paralysis agitans, the circumstances are just the reverse—a strong effort will, for a few moments, suspend the tremor.—*Med. Chirurg. Rev. Jan.* 1831, and *Lond. Med. Gaz. Oct.* 1830.

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32. *Chloride of Lime in Pectoral Disease, with great Fœtor of breath and Expectoration.*—Drs. GRAVES and STOKES have administered the chloride of lime in a case of pectoral disease, with great fœtor of breath and expectoration, with remarkable benefit. The patient, in consequence of exposure, was attacked with pain in his side, and other symptoms of inflammation of the lungs, followed in a few days by fœtid breath and expectoration, extreme debility, hectic fever, cough, &c. A pill of three grains of chloride of lime, with one of gum, was given three times a day, and the quantity increased to twelve grains a day. The bed was also sprinkled with a solution of the salt. The most rapid and marked amendment followed—the fœtor of the breath and expectoration disappearing in a few days. The remedy was omitted, the fœtor returned, and was again checked by resuming the use of the remedy.—*Dublin Hospital Reports, Vol. V.*

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33. *Delirium Tremens.*—Professor SPERANZA, of Parma, in his clinical report for 1829, states that he treats this disease successfully by bleeding, leeches to the head and anus; jalap, calomel, prussic acid, and application of ice to the head. He prefers of the various names given to this disease that proposed by Frank, viz. *encephalitis tremefaciens.*—*Bull. des Sc. Med. Sept.* 1830.

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34. *Catalepsy accidentally cured.*—Two cases of this kind are related in the *Journ. Universel. de Med.* for October, 1830. The first occurred in a girl, ten years of age, who had been cataleptic for several months. The paroxysms increased in frequency, various remedies were employed in vain, when during an attack she struck her head violently against a stone, which produced a flow of blood, which not only relieved the paroxysm, but also produced a complete cure of the disease.

The second case was a young farmer, of a melancholic temperament, of about twenty years of age, who, after continued trouble, was attacked with catalepsy, sometimes accompanied with delirium and somnambulism. Bleeding, leeches, baths, blisters, emetics, &c. were employed in vain, when a copious epistaxis spontaneously occurred about the thirteenth month of the disease, which was followed by a complete disappearance of the affection.

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35. *Chloride of Lime in Gonorrhœa.*—Dr. EDWARD GRAEFE, of Berlin, has detailed five cases of gonorrhœa in which the chloride of lime was employed with much advantage. The first was a stout robust man, aged twenty-six years. He was first directed to take a table-spoonful, every two hours, of a solution of nitre in almond emulsion, of the strength of ʒj. to ℥viij. This had the effect of allaying the burning and chordee. He was then put upon the following mixture:—℞. chloride of lime, ʒj.; almond emulsion, ℥vij.; syrup of gum, ℥j. M. A table-spoonful to be taken every three hours. After taking two or three doses of the medicine, the patient experienced painful erections, burning in the course of the urethra, and pain in voiding urine. All these symptoms, however, were much abated before the whole of the mixture was taken, and the discharge was much diminished in quantity. The same medicine was repeated, and with the effect of producing the same symptoms that we have enumerated above, but in a less degree. A third portion of the same mixture completed the cure.

The second case was that of a robust individual, aged about twenty-four years, who had been labouring under the disease for several weeks. After using ʒj. of nitre in the almond emulsion, as above, he was put upon the use

of the chloride of lime, ʒj. to ℥viij. of the almond emulsion. After taking six doses of the medicine, the patient experienced a [illegible] and pricking sensation in the urethra, a soreness along the course of [illegible], with difficulty of voiding urine. On the fourth day, the same symptoms continuing, ʒiss. of the tinct. opii was added to the mixture, with a view of allaying the irritation, which was supposed to arise from the chloride. On the next morning, the symptoms had abated, and the discharge was diminished in quantity. On the eighth day, he was ordered chloride of lime, ʒiss.; almond emulsion, ℥viij.; tinct. of opii, ʒiss.; syrup of opium, ℥j A table-spoonful to be taken every three hours. In a few days he was entirely cured.

The two next cases were treated in nearly the same manner, with the exception that the quantity of the tinct. opii was reduced to a scruple. The fifth case was that of an individual who had been afflicted about six months with the consequences of gonorrhœa. He was put upon the use of the following mixture:—℞. chloride of lime, ʒiss., tinct. opii, ʒj.; almond emulsion, ℥viij syrup of opium, ℥j. A table-spoonful every three hours. The patient took three portions of this medicine, without exciting the unpleasant symptoms mentioned above; but it did not overcome the disease. A fourth portion was directed, with the addition of an injection composed of ʒj. of the chloride of lime, the same quantity of tinct. of opium, and ℥viij. distilled water, to be employed morning and evening. The patient experienced slight burning and pricking in the urethra: this, however, was only temporary. Finding, after using a second portion of the injection, that some symptoms of the disease still continued, he was directed to take the following pills.—℞. bals. copaiva, ʒj: calomel, gr. v.; cubebs, q. s. to make into pills of two grains each, of which six were to be taken three times a day. By this course the patient was entirely cured, and experienced no return of his disease.—*Journal für Chirurgie und Augenheilkunde, Band. XIV. Stuck.* 2.

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36. *Tetanus and Neuralgia Treated by the External Application of the Acetate of Morphium.*—Dr. Gaspard Cerioli reports two cases, one of traumatic tetanus, the other of neuralgia, which were successfully treated by the application of morphium to a blistered surface. In the first, a quarter of a grain of morphium was applied to the neck, the skin having been previously denuded of the epidermis by a blister. This was repeated twice during the first day, and was afterwards increased to one-third of a grain. A long-continued and obstinate neuralgia of the face was cured by a similar course. A case is also reported of a distressing irritation in the larynx, which prevented the person from sleeping, by keeping up a constant cough, and which seemed to threaten the development of laryngeal phthisis. It was speedily removed by use of morphium as in the above instances.—*Hecker Litterarische Annalen der Gesammten Heilkunde, June,* 1830.

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37. [illegible] *in Croup.*—Dr. Fritzl, of Magdeburg, speaks in [illegible] the sulphuret of potassa, or liver of sulphur in the [illegible] croup. The patient [illegible]st to have one enema of vinegar and [illegible], the strength of which must [illegible]ied to suit the age of the child. A tea-spoonful of the following mixture is then to be administered every hour, or [illegible] half hour, according to the urgency of the case:—℞. kali sulphuret, gr [illegible] pulv. sacchar. alb. ℥j.; aquæ napthæ, ℥ss., M. S. A. The child must [illegible] be allowed muc[illegible]ous drinks, and should have the throat, anterior part [illegible] neck and che[illegible]bed with half a tea-spoonful of the follow[illegible]iment [illegible] hour:—℞. ung[illegible]t. hydrarg. ciner. liniment. ammon[illegible], [illegible] M. [illegible] liniment. [illegible] most cases, in the course of a few hours, the [illegible]mes [illegible], [illegible] expectoratio[illegible] mucous, and shreds of false m[illegible]e: the respi[illegible] less embarrassed, and [illegible] operations take place by stool.—*Hufeland und [illegible]'s Journ. für Pract. Heilkunde, B.* 70, *Stuck.* 1.

40. *A Case of Involuntary Contractions of the Muscles Cured by the Employment of the Hydrocyanate of Zinc.*—A female, aged thirty-six years, of a nervous temperament, had been affected for twelve years, with an irregular involuntary contraction of the muscles of the lower extremities, brought on by a severe fright. After several remedies had been employed without success, Dr. [illegible] prescribed for her the hydrocyanate of zinc, in doses of one-tenth of a grain, with a large quantity of mucilage. She was also directed to take quassia and valerian at the same time. At first the medicine could not be given in larger doses without exciting violent colic, vomiting, and diarrhœa. In proportion, however, as the system accommodated itself to the remedy, the dose was increased to half a grain. So beneficial was the result, that towards the close of the year the patient was able to leave the house, which she had not done during the preceding twelve months.—*Hufeland and Osann's Journ. für Pract. Heilkunde, B. 7[illegible], Stuck 2.*

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Perforation of the Stomach.—A child, who had been hitherto healthy, was seized with a dry, convulsive, asthmatic cough, followed, in the course of a few weeks, by an attack of hydrocephalus, which terminated fatally. On examination of the body, in addition to the other lesions which existed, a large perforation was observed, occupying the fundus of the stomach.—*Hufeland and Osann's Bibliothek, der Practischen Heilkunde, B. 6[illegible], Stuck. 5.*

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Nitro-muriatic Pediluviæ in Engorgements of the Liver and Spleen.—Dr. [illegible], of Pisa, has employed the nitro-muriatic pediluviæ, as some years ago recommended by Scott, with success in some cases of engorgement of the liver. He makes the bath by adding six ounces of water, three ounces of muriatic and two ounces of nitric acid, to five gallons of warm water. For some weeks the pediluvium is used every night, and afterwards every other night. The feet are kept in the bath from twenty to forty-five minutes.

Dr. [illegible], of Sersale, in Calabria, says that this remedy is equally useful in engorgements of the spleen, especially those which succeed to intermittent fevers.—*Gazette Medicale, Feb. 1831, from the Osservat. Med.*

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41. *Treatment of Epilepsy by repeated Doses of Ipecacuanha.*—Dr. Ferrara, of Naples, has successfully treated a young lawyer who was attacked with epilepsy, by the administration of four or five grains of ipecacuanha every morning, and the same dose whenever any premonitory symptoms of the disease appeared.

Dr. Gaetano Allegretti, another Italian physician, induced by the success of the remedy in this case, has had recourse to it in four instances, in three of which he says a cure was effected.—*Ibid.*

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42. *Treatment of Scrofula with Iodine.*—At a meeting of the Academy of Sciences of Paris, on the 3d of January last, M. Majendie made a report on the treatment of scrofulous diseases at the Hôpital St. Louis, by the preparations of iodine. In a preceding volume, (Vol. VI.) we gave a very full account of M. Lugol's method of employing the iodine for the cure of scrofula, and noticed the success which had so far attended the use of that remedy. A committee was appointed by the Academy to verify by new facts the results first obtained. This committee state in their report, as we learn from an abstract in a late No. of the *Gazette Médicale de Paris*, that the recent success of which they have been witness do not leave any doubt of the complete efficacy of the preparations of iodine in the treatment of scrofula. They say that it has not only succeeded in the early, but that it has effected cures in the most advanced stages, where there were great alterations of the glands and other organs, serious lesions of the bones and principal articulations, accompanied with general affections, which announce an approaching fatal termination of the disease.

A number of very striking cases are related by the committee, one of which we shall notice. It is that of a postillion, twenty-[illegible] age, who was put under treatment in a state of colliquation, which [illegible] beyond the resources of art, and M. Lugol had admitted him into his wards, only to contribute to the anatomical history of scrofula.

The case was one of cutaneous scrofula, which occupied both arms and shoulders, and both legs; the muscles were denuded and reduced to a state of extreme tenuity. There was copious suppuration; for [illegible] years upwards of a pint of pus had been discharged daily. for eight[illegible] months he had had colliquative diarrhœa, there was the last degree of maras[illegible] the patient was feeble, stunted, and appeared only ten years of age. This patient was cured by the ioduretted treatment in six months; and the committee were struck as much with the beauty and firmness of the cicatrices as with their vast extent.

The method of M. Lugol does not solely differ from that of other practitioners in the use of iodine; all his patients use exercise. Thus patients affected with white swellings of the foot, knee, hip joint, and other articulations. are not kept in bed, but walk daily. Thus a young man who had extensive caries of the metatarsal bones, and who had been kept in bed for four months in the surgical wards, was transferred to those of M. Lugol, who treated him by ordering him to walk every day. The patient was cured after a number of pieces of the metatarsal bones came away. The reporter concludes by bestowing the greatest praises on M. Lugol.

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43. *Hydrophobia successfully Treated.*—At a meeting of the Academy of Medicine, on the 18th of January last, M. Boisseau made a report on a case of hydrophobia, communicated by M. Ozanam, of Lyons, and which was successfully treated. The patient had been bit in the leg by a mad dog. On the nineteenth day the wound had cicatrized—on the twenty-fifth the consecutive symptoms appeared: as moroseness, loss of appetite, insomnia, furious delirium flushed face, cries of affright, &c. M. Ozanam bled the patient about three pints, and applied caustic potash to each side of the [illegible]—[illegible] to the head [illegible]der composed of musk, sulphuretted oxide of antimony, muriate of ammonia, and sugar in small doses every half hour: and enemata of valerian and laudanum. The symptoms appeared to abate, and caustic potash was then applied to the cicatrix. The same treatment was continued for four days, and at the same time leeches were applied to the mastoid apophyses. The amendment continued, and on the thirty-fifth day the patient was discharged cured. [illegible] considers hydrophobia as an inflammatory spasmodic affection.—*Gazette Médicale, Jan.* 1831.

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44. *Savine as a remedy in Chronic Passive Uterine Hæmorrhages.*—Dr. Feist in a communication in the *Gemeinsame Deutsche Zeischift für Geburtskunde* Vol. I[illegible] that he has derived great advantage from the use of savine in [illegible]ich have continued for a long time, and when the dis[illegible] fœtid. He uses the remedy according to the following [illegible]:—R. Powdered sa[illegible] leaves, ℥iij.; extract of savin, ʒij.; dis[illegible]ed oil of savin, ℈j. mix and divide into pills of three grains each. Four of [illegible] are to be taken three times a-day at first, and the number gradually in[illegible]ased until ten are taken at each dose. The credit of being the first to call [illegible] attention of practitioners to the use of this article in metrorrhagias, is award[illegible] to Dr. Wedekin[illegible]ev. *Méd. Oct.* 1830.

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[illegible] *Efficacy of Hydrocyanic Acid in curing Vomiting not d[illegible] In-[illegible]*—We extract from a clinical lecture by Dr. Elliot[illegible]orted in [illegible]ber of the *London Medical Gazette*, the following rem[illegible] on the e[illegible] of hydrocyanic acid as a means of arresting vomiting. It should first be ascertained, says Dr. E. whether there is inflammation or not; for if there be inflammation, the hydrocyanic acid would not cure it: the case must be treatee

like inflammation of any other part of the body. But if you can find no inflammation whatever, and you find no cause for vomiting in any other parts of the body, (it will often arise from an irritation in the intestines, the kidney, the womb, and ten thousand distant causes,) then the hydrocyanic acid will relieve the vomiting far more, I am satisfied, than any other medicine. I have not found it relieve the pain of rheumatism or cancer, or pain situated in any of the distant parts of the body, or pain in the intestines. it is of no use in colic, though it is said by some to be of occasional service in neuralgia. As an anodyne I have not found it of the least use in general, except in cases of pain of the stomach. It has the properties of an anodyne on the stomach particularly, and has a tendency to lessen the morbid irritability which produces vomiting. It is no exaggeration when I state that I have frequently seen vomiting, which has lasted for months, cease on the exhibition of the first dose of this medicine. Frequently, however, in cases of spasmodic pain of the stomach, you will find that the first dose, or the second, or even one week's exhibition, will not answer the desired end: you will be much more struck with its use in lessening vomiting than in lessening pain in the stomach. But you will find it of no service unless you make a distinction between the existence of inflammation, and the existence of distant causes, on the one hand, and mere morbid irritability of the stomach itself upon the other.

Hydrocyanic acid is a medicine that is exceedingly powerful, and you cannot rest on the same dose when the stomach is empty as when it is full. When the stomach is full the difference of a drop may cause a great difference in the effects. Supposing you are giving three drops, three times a day after meals, it certainly will not be right to give more than one or two drops upon an empty stomach. To avoid any confusion which may arise, it is best always to give it after meals, otherwise you must vary the doses at different times of the day. You cannot, in general, give it on an empty stomach more than once in the day, because when food has been once taken, the second meal comes usually before the stomach is so empty as it was before. On this account I make it a rule to give it after breakfast, in the afternoon, and the last thing at night. As it is so powerful, you cannot tell before hand the dose that will be borne, and you should begin with a small quantity, such as you know can hardly disagree with the stomach. I begin with one minim, though you may begin with two, and many persons do so, but it is safer to begin with one. I give one minim three times a day, diluted with water, or aromatic water; and in the course of a day, if no unpleasant effect be produced, I increase the dose to two minims, and the third or fourth day I give three minims, and so on till it produces the effect I desire, or some inconvenience arises. Although it will relieve the vomiting arising from mere morbid irritability, it will, from its irritating properties, likewise cause it. If you give an over dose, it may produce extreme nausea, extreme vomiting, and perhaps gastrodynia—pain in the stomach. It is common for many narcotics to be stimulating as well as sedative, and this is the case with this medicine; and medicines act with different powers on different people, and therefore you should give it in small doses at first, if you wish to make it act favourably. Tobacco will arrest the action of the heart, and cause complete prostration of strength, and yet it excites sneezing, and one person is affected by a quantity not noticed by another. In general people bear from two to four minims, but you not unfrequently meet with individuals with whom five minims do not disagree, and now and then you may safely increase the dose to six or eight, or even more.

You will find this of great use for another purpose—in making other medicines sit upon the stomach, which would otherwise disagree with it. You may lessen the morbid irritability of the stomach so much, that iodine, colchicum, and medicines of that active description will frequently sit upon it, whereas they would not unless ten minutes before you administered them you gave a dose of hydrocyanic acid. These medicines may remain upon the stomach if you unite prussic acid with them, but it answers better for this purpose if given ten minutes before, so as to come into full operation before the acrid medicines

are taken." In organic affections of the stomach, you will frequently find it answer better than any other medicine. if there be cancer of the stomach, scirrhus, pylorus, or whatever the organic disease may be, you will often find the hydrocyanic acid allay the vomiting and pain much more than any thing else.

OPHTHALMOLOGY.

46. *Purulent Ophthalmia treated with Iodine.*—M. Majendie in a report to the Academy of Sciences, relative to the treatment of scrofula by iodine, relates his having seen at the Hopital St. Louis, under the care of M. ..., a case of purulent ophthalmia cured by the employment of ... and injections, with the internal use of iodine. The state of the eyes in the young patient would be difficult to describe; they were hypertrophied to the utmost degree: they had lost their form, and the pus gushed out in a continued jet, like the most copious blenorrhagia. After the fourth days' employment of the iodine, an amendment was perceived, and in a month he was cured.—*Gazette Médicale, Jan.* 1831.

47. *Cataract cured by the Juice of the Anagallis Phenicoflora.*—M. ... has communicated to the Academy of Medicine, a case of cataract cured ... days by means of lotions to the cataractous eye of the juice of the *anagallis phenicoflora*, extracted in the month of September. The detail of the case is, however, very imperfect.

48. *Cases of Amaurosis successfully treated.*—Dr. Bozzi has communicated to the Medical Society of Florence, five cases of amaurosis successfully treated. From the account of these cases in the *Annali Universali di Medicina*, July, 18..., it appears that in the two first cases, (a man and a woman,) the disease was caused by a bilio-gastric affection. They were cured by ... but principally by repeated emetics, as advised by Cotugno and ... by Stevenson. The vapour of ammoniacal ether was also directed to the eye. The treatment was entirely successful.

In the third case the disease was produced by excesses in the use of spirituous liquors; the patient was treated first by emetics, afterwards by ... tized drinks, rigid diet; diluent drinks, wine and water, and repose.

The fourth case was occasioned by masturbation. It ceased on the abandonment of this vicious habit, the moderate use of good wine and a milk diet.

The fifth case was successfully treated by anthelmintics, the affection appearing to depend on the presence of worms in the intestinal canal.

49. *Inflammation of the Ciliary Ring.*—Dr. Ammon, in the thirty-third volume of Rust's Magazin, states that the ciliary ring is sometimes primarily affected with inflammation. The disease, he says, is ushered in by occasional shooting pains in the ball, and involuntary winking. A fasciculus of red vessels just behind the cornea next appears, like the red ring in iritis, but not extending all round the cornea, as in the latter disease; subsequently the inflammation extends to the membrane of the aqueous humour, and to the iris when the usual symptoms of these diseases make their appearance. Staphyloma scleroticæ is also, according to Dr. A., one of the consequences of inflammation of the ciliary ring. Scrofulous and rheumatic persons are said to be most liable to this disease. It is usually excited by exposure to cold. The disease is treated by Dr A. at first by antiphlogistics, and afterwards by the internal use of the following:—℞ terræ pond. salitæ, ʒj.; aq. laurocerasi, ℥j.; 11 to 40 from three to six times a day. Also the application of linen compresses, or a flaxseed poultice with belladonna to the eye.

It does not strike us that the author has very clearly made out the existence of the inflammation of the ciliary ring as a primary disease, or at least pointed out

[illegible] tion which a diagnosis may be drawn, but it has appeared worth [illegible] notice the subject, that the facts may be determined by such as have [illegible] for that purpose.

SURGERY.

[illegible] gotomy successfully [illegible] a [illegible] affected with a large [illegible] operation of lary[illegible] recently been successfully per[illegible] M. Willaume, chief surgeon [illegible] Military Hospital of Metz. [illegible] operation [illegible] eight, affected with [illegible] the trachea, when [illegible] oth [illegible] of this foreign [illegible] and [illegible] threatened, laryngotomy [illegible] was discharged [illegible] effort to cough. The [illegible] promptly cicatrized, and the voice was not in the least changed.—*[illegible] des travaux de la S[illegible] Med. [illegible] de la Moselle.*

[illegible] Strangulation.—Dr. [illegible] *Giornale Patologico-* [illegible] *Palermo,* [illegible] May, 18[illegible] [illegible] a portion of the [illegible] passed through [illegible] the diaphragm [illegible] similar cases are on [illegible] *Revue Med.* [illegible]

[illegible] radical cure [illegible]—We [illegible] *Medicale de Paris,* for [illegible] M. [illegible] chet to the Academy of Medicine, on two me[illegible] the radical cure of hernia. [illegible] small, or better to old and large [illegible] between the sac and the contained [illegible] reducible. The method consists in [illegible] the part which protruded as long as possible [illegible] the slow contraction of the apo[illegible] neurosis, [illegible] the intestine, which contraction, M. R. [illegible] ays, will take [illegible] mechanical [illegible] opposed. The method of M. R. requires [illegible] should be placed upon his back, the pelvis [illegible] higher [illegible] and the side on which the hernia is situated [illegible] than [illegible]. A bandage must be placed over the orifice of the ring, and compresses, either dry or moistened [illegible] tonic and astringent lotions, placed between the cushion of the bandage and the inguinal ring, the most absolute rest is also necessary. M. R. relates eight cases cured by these means. The cases occurred in persons of different ages, and both sexes. Thus one was a man, aged twenty [illegible], with a recent and small inguinal hernia—he was [illegible] twenty-six days. Another, a woman, aged sixty, affected with hernia [illegible] upwards of twenty years, was cured in six months. The ordinary duration [illegible] treatment, however, has been two months. M. R. requires his patients to [illegible] for some time after their cure, but he has never seen a relapse [illegible] when the patient has not continued in a recumbent posture during the whole course of the treatment.

The reporter speaks favourably of the candour with which the memoirs are written, and the evident desire of the author to relate the truth, and to advance science. The treatment is safe and worthy of trial.

M. Dumas, of Lyons, has also communicated to the Academy of Lyons, a memoir on the radical cure of hernia; the method proposed by him is:—diet, repose, recumbency on the back, and astringent applications upon the hernia. The *Gazette Medicale,* to which we are indebted for th[illegible] notice, does not furnish us with further details.

53. *New Method for the cure of Hernia.*—M. BELMAS has communicated to the Institute a method for the cure of hernia, proposed by himself, and which is thus described in the *Journal des Progrès*, Vol III. 1830. If a gold beater's skin filled with air, be introduced into the abdominal cavity of a dog, it excites around it, but merely to an extent corresponding with its size, an inflammatory irritation, followed by a lymphatic deposition, an absorption of air and also of the bag itself so that at the expiration of some days, a concrete albuminous mass can alone be found, and after some weeks only a fibrous knot remains. Similar experiments made by M. Belmas on the hernial sac of dogs have been followed with the same result as in the abdominal cavity. Filled with the distended bag, the sac inflames through all its extent, and is oblite[illegible] in a few days in the manner above-mentioned, without preserving any remains of the foreign body introduced [illegible] female dogs affected with hernia, which have thus been operated [illegible] of these animals, three have been radically cured. M. Belmas operates in the following manner.—A small bag of gold beater's skin perfectly empty, is connected with a tube furnished with a stop-cock. A small incision is made with a short and narrow bistoury at the most inferior part of the hernial sac, the edges of which are drawn asunder, and there is introduced into the sac a cannula and stilette to the extremity of which the tube of the bag is fitted. The point of the [illegible] pushed with suitable precaution to the superior part of the sac, [illegible] The stilette is then [illegible] through the opening which [illegible] skin, the cannula and [illegible] to be drawn out. [illegible] to be attached the [illegible] the stop-cock of the [illegible] be opened, and a [illegible] into the bag of gold beater's skin, and there retained [illegible] The operation has already been practised on a man [illegible] complete success, notwithstanding unfavourable circumstances, such as the advanced age of the patient, his cachectic constitution, a paralysis of the bladder, a [illegible] catarrh. Much swelling succeeded on the second day, and M. Belmas dreaded some unpleasant consequences, but none occurred. For two months [illegible] no return of the hernia, although the patient [illegible] cough. This man has been presented at the [illegible]

It should be remarked, that the bag should be introduced in a [illegible] state in the sac. M. Belmas who at first thought it most [illegible] to cover it with oil, discovered that this also was sufficient to [illegible]tion.

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54. *Lithotrity.*—Some time since the general administration of the hospitals of Paris gave to M. Civiale the charge of a ward in the Hospital Necker which was assigned for the treatment of calculous patients by lithotrity. In a report lately made to the Academy of Sciences, and which we find in a late number of the *Gazette Médicale de Paris*, M. Civiale states that within the space of six months sixteen patients were admitted into his ward; seven of these were operated upon by lithotrity, four by lithotomy, and the five others were not in a condition to undergo any operation.

The first case operated upon by M. C. was a young man, the calculus was friable, and filled the cavity of the bladder almost entirely, so that it was difficult to inject into that organ a few spoonfuls of water. The patient was cured. The calculus in the second patient was small, but there was structure of the urethra, which it was necessary first to destroy—great tumefaction of the prostate, and catarrhus vesicæ. These circumstances would have rendered the operation impracticable had the calculus been large, being but small, it was completely destroyed in ten minutes. The third patient was a man of almost eighty years of age, much worn down by acute and long-continued sufferings. The stone was as large as a pullet's egg. The patient supported the operation well, notwithstanding his advanced age. The fourth patient was sixty years of age, and so irritable that the introduction of a bougie in the urethra produced convulsive

[illegible] The irritability was diminished by the repeated introduction of bougies [illegible] an appropriate medical treatment, and in four [illegible] of some minutes each [illegible] calculus, (an uric acid one,) which was of the [illegible] a small nut and very hard, was destroyed. The fifth case was that of an old man, exhausted by pain and [illegible] great alteration of the genito-[illegible] bladder was the seat of [illegible] and contained a great number of [illegible], requiring many sittings for [illegible] destruction. The [illegible] thing very remarkable [illegible] details, except that in the [illegible] the patient had learned to arrest the [illegible] of his urine before the bladder was completely emptied, and thus [illegible] himself from the pain [illegible] by calculous persons when [illegible] bladder contracts upon the [illegible] interesting as showing [illegible] little influence which the operation [illegible] upon other coexisting [illegible] lesions.

M. Civiale states that he has himself operated [illegible] hundred and fifty-[illegible] patients, but he does not communicate the [illegible] report on circell.

[illegible] *Section of the Sciatic Nerve.*—This operation has been performed by Dr. M[illegible] of Bologna, for the cure of an [illegible] neuralgia, seated in the super[illegible] ramifications of the leg and [illegible] years duration, and which had resisted a multitude of remedies [illegible] the operation. Dr. M [illegible] a number of experiments upon dogs [illegible] that the sec[illegible] of the sciatic nerve, two-thirds down [illegible] paralysis, and [illegible] atrophy [illegible] extends from [illegible] muscles of the leg [illegible] the leg does not [illegible] lose the power [illegible] for the pur[illegible] of locomotion, [illegible] paralysed, and the [illegible] not being affected [illegible] amputations of the thigh, [illegible] These results deter[illegible] Dr. M [illegible] accordingly did on the fifth [illegible] March 18[illegible] in the presence of Professors M[illegible] Venturoli, Paolo Baroni, [illegible] M. Joseph B[illegible] The patient was a man aged thirty-one years. The [illegible] inches above the popliteal hollow, and was two [illegible] and a half in extent. At the moment when the section of the nerve at [illegible] upper part of the wound was made, there occurred a trembling of all the [illegible], and a pain similar to the pricking [illegible] rapidly extended from the [illegible] of section [illegible] column and [illegible] the patient fainted. When [illegible] recovered [illegible] Dr. M. requested him to be very attentive [illegible] the nerve was then divided at the lower portion of the [illegible] without the patient being aware of it. [illegible] wards of two inches of the [illegible] was thus removed in order to prevent its [illegible] From the moment of [illegible] division of the nerve, all pain ceased, and had not returned five months af[illegible], when Dr. M. communicated the case to the Medico Chirurgical Society of Bologna. There was paralysis however of the leg and foot, with tingling and [illegible] of weight in these parts, but there remained an obtuse sensibility of [illegible] of the leg.—*Gaz. Med.* [illegible] 18[illegible] *Osservat. Med. XXIII.*

[illegible] *Wound of the Pericardium and Heart.*—[illegible] to the Academy of Sciences, at their meeting on the [illegible] of December last, a soldier who had been wounded by a ball, which passed through the chest, entering two or three lines from the left nipple and passing out between the spine and the scapula half an inch from its inferior angle. It is supposed that the ball passed through the pericardium, a portion of the left lung, and furrowed the surface of the heart. There was at the moment of the accident extreme prostration, with all the symptoms which characterize these lesions. It was expected for the first forty-eight hours that he would expire every moment. By appropriate means he was recalled to life, and the cure was complete.—*Gazette Médicale, December,* 18[illegible]

MIDWIFERY.

57. *Vagitus Uterinus.*—M. BAUDELOCQUE has communicated to the Academy of Sciences a case of labour, in which the waters being evacuated, the face of the child presented to the neck of the uterus, and the child uttered cries as strong as if it had been delivered. This and some analogous facts prove, according to M. Baudelocque, that it is important to introduce air within the membranes, as he has proposed when the child is in danger of perishing.—*Journal Universel et Hebdomadaire, Tom. I. No.* 11.

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58. *New symptom of Pregnancy previously to the Fourth Month.*—It is well known how uncertain the signs of pregnancy are, previously to the fourth month. Dr. BECCARIA announces in the *Annali Universali di Med.* for September last, that he has discovered a symptom by which it may be determined: this is a very acute pulsating pain in the occipital region, occupying particularly the part in which Gall locates the organ of the instinct of reproduction. This pain, Dr. B. says, is accompanied with giddiness on the least motion of the head, and with difficulty in supporting the light. This pain comes on suddenly, without any premonition. it continues for some time, an inclination to sleep succeeds, and after sleeping some minutes, the patient awakes completely free from the pain, and with a strong desire for food. These pains reappear daily, at nearly the same hour, for about eight days: they afterwards disappear spontaneously, without any remedy employed to remove them earlier. This symptom, Dr. B. says, commonly manifests itself, unaccompanied with the signs usually laid down as denoting pregnancy previously to the fourth month. Dr. B. asserts that he has observed this symptom in women who were not aware of being pregnant, and even did not suspect the fact.

Should the assertion of Dr. Beccaria prove true, it will not only be highly important in a medico-legal point of view, but extremely interesting in a physiological one.

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59. *Cæsarean Operation, by which both Mother and Child were saved.*—A case is reported by Dr. FR. JOHANKNICHT in *Abhandlungen und Beobachtungen der Arztlichen Gesellschaft zu Minister*, in which, by the Cæsarean operation the lives of both the mother and child were preserved, although many of the circumstances under which it was performed were highly unfavourable. Another case is also reported, by the same, in which the life of the mother was lost, but the child was preserved.—*Hufeland and Osann's Journ. fur Pract. Heilkunde, Band.* 70, *Stuck.* 2.

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60. *A case in which the Fragments of a Child were discharged per anum.*—A widow woman, aged forty years, applied to Dr. BOOGAARD, in October, 1819, complaining of great weakness, induced by a troublesome diarrhœa. She was much emaciated, her ankles œdematous and her general aspect leucophlegmatic. Dr. B. ordered for her *mixtura diaretica amara*, from which she seemed to be somewhat relieved, in the course of a fortnight. In the spring of 1820, the diarrhœa again became troublesome, and she remained under the care of her physician throughout the year. In 1821, it was attended with fever and loss of appetite, and in her discharges were discovered some fragments of the bones of the cranium of a matured fœtus. She stated that she had been married seventeen years, had borne four living children, and had aborted three times. She had been a widow three years and a half, but for three years before had not menstruated, and from this circumstance supposed she was pregnant. During the first four months of this period, her health did not suffer, subsequently, however, the left side of the abdomen became tumid, she felt uncomfortable and suffered much from pain in the loins, and a bearing down sensation. She could not lay on the left side without pain, but the abdomen was not painful to

the touch. She was sensible of slight motion. About the seventh or eighth month she experienced severe pain, which she supposed to be the pains of labour. The midwife, said, however, that she could not feel the child, but declared it to be dead, and took her leave, and did not return. The pains became urgent, a considerable hæmorrhage ensued, but no waters were discharged. The motions of the child were now active and painful. The pains gradually subsided, but a stinking grumous blood continued to escape during the following three months. The breasts swelled, and secreted milk. The abdomen became flaccid, and the woman was at a loss what to think of her situation, but supposed that the child was dead and undelivered. She became emaciated. The left side of the abdomen above the hip was prominent and painful to the touch: she complained of numbness in the left inferior extremity, and an irregular state of the bowels, which were affected with frequent diarrhœas. In the summer of 1823, she passed, for the first time, by stool, after a severe pain, a bone not entirely deprived of the flesh, which she supposed to be one of the arm or leg. She afterwards passed the left half of the frontal bone, the two parietal, one entire, the other in three fragments, the occipital, the whole of the upper jaw, and half the lower, one malar, the sphenoid, temporal, and one clavicle, all firmly ossified, and apparently belonging to a full grown fœtus. Dr. B. prescribed for her, during this period, opiates, *resolventia et roborantia*, according to circumstances. She gradually improved, and by the end of April she had regained her health. In 1824, she enjoyed good health, and had had several returns of her menses.—*Magazin der ausländischen Literatur von Gerson und Julius, Feb.* 18[illegible]

MEDICAL JURISPRUDENCE.

Poisoning by the Topical Application of Arsenic.—The danger of applying arsenic to large surfaces of the skin has long been known to medical men, the article is, however, frequently resorted to by irregular practitioners, and not unfrequently with fatal effects. In the *Transactions Médicales*, we find related the cases of three children who were destroyed by the use of this poison. These three children who were of the ages of seven, nine, and eleven, had scald head, to which the mother, at the recommendation of a charlatan, applied an ointment, which he assured her would cure her children in a few days. In a few hours the children were attacked with pains all over their body, dreadful colic, and the next day the youngest died, and the day after the two others. Dr. [illegible], of Sierck, examined the bodies of these children, and the ointment which had been applied to their heads. The bodies were found swelled and ecchymosed; the membranes of the brain greatly injected, the substance of this organ inflamed, presenting a number of sanguinolent spots; lungs hepatized and engorged; stomach phlogosed; ecchymoses in the duodenum and small intestines.

The ointment was found to contain arsenic.

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62. *Poisoning with Coal Gas.*—Repeated accidents have happened in Britain from the explosion of oil gas or coal gas; but, so far as we are aware, there has not yet been a single instance of poisoning or asphyxia produced by the incautious inhalation of it. There is every reason indeed to suppose that when inhaled in a moderately diluted state, it is a very feeble poison, and that when considerably diluted, it may be breathed habitually without danger and without inconvenience. An accident, however, has lately happened at Paris, which proves that there is a limit to the statement now made, and that the escape of a large quantity of gas into a house is attended with other risks—besides the chance of explosion from some fool walking into the contaminated apartment with a light to look for the cause of escape. In April last, five individuals in

a w[illegible]house in the [illegible]e de Bu[illegible]at Paris, were more or less severely affected, a[illegible]illed, in co[illegible]equence [illegible]an acc[illegible]ental leak near the main stop-cock of t[illegible]ce-p[illegible]. They went to bed about half-pa[illegible], and about two, one of them who sle[illegible]n the ground floor was awakened [illegible] the smell of the gas, and a sense of approaching stupor. He immedi[illegible]y al[illegible]med his companions, who slept on var[illegible]s floors above, and found t[illegible] all [illegible] a state of profound sleep, and when [illegible]oke excessively lethargic. Of the five individuals, four recovered, and a[illegible]ear to have never been in great d[illegible]ger from the moment that they were fr[illegible]bled from the arm. The fifth was heard moaning by the man who gave th[illegible]rm, and found insensible and incapable of being roused, with froth issuing [illegible]m the mouth, vomiting, and spasmodic convulsions. A physician was immediately procured, who found all the symptoms of great oppression of the b[illegible] complete coma, froth at the mouth, redness of the face, stertorous re[illegible], and dilated pupils. An unsuccessful attempt was made to bleed hi[illegible]e arm. Five-and-twenty leeches were then applied to each side of the [illegible] and as they filled, the wound in the vein of the arm began to bleed, wh[illegible] at the same time, the patient recovered his senses a little, and compl[illegible] of being too soon awakened. His breathing, however, continued labori[illegible] no fu[illegible]her amendment took place, vomiting recurred between five and se[illegible] in [illegible] morning, and he died at eight, six hours after the alarm was given.

When the body was examined next day, putrefaction had just commenced The limbs, however, were extremely rigid. There was a good deal of pale lividity on different parts. The countenance was pale and not bloated, and the lips were n[illegible]iscoloured. The vessels of the dura mater discharged much blood when the skull-cap was removed, the vessels of the arachnoid were much gorged, [illegible]d the substance of the brain presented an unusual number of red points when cut; but there was little serosity in the ventricles. The lungs were little distended, the [illegible]eft united to the pleura of the ribs by old adhesions, rather pale in colour anteriorly, and not at all gorged. The right lung, on the contrary, was violet-coloured, the edges of its lobules emphysematous, its substance red, [illegible] blood, and yielding much froth when squeezed. The [illegible]embrane o[illegible]pe was in general white, and contained a good deal of [illegible]oth. In the rig[illegible]onchial tube there wa[illegible] a French bean of ordinary size; entire, boiled, and which had evidently pro[illegible]eded from the stomach. There was no particu[illegible] appearance in the heart and great vessels, except that the blood was every [illegible]here completely and firmly coagulated. The surface of the intestines was re[illegible]ish. The stomach contained fragments of French beans, which the deceased had taken for [illegible]upper. The liver had entirely changed its appearance, and acquired a greenish-slate colour, and an unusually firm consiste[illegible]e. It [illegible]ears probable from the dissection and symptoms antecedent to death, th[illegible] fatal issue of the case was rather owing to the obstruction of the right l[illegible] the bean, than to [illegible]isoning with the gas.—*Edinburgh Med. and Surg. J[illegible] 1830, from the Annales d'Hygiène Publique et de Médecine-Lé-[illegible]le, Ju[illegible]30.*

MEDICAL STATISTICS.

63. *Report of the Coombe Lying-in Hospital.* By Richard Reed Gregory, Esq.—Si[illegible]e opening of this institution on the 3d of Februa[illegible]1829, 691 patients ha[illegible]een delivered in the hospital, of whom nine die[illegible]he presentations [illegible]as follows:—natural 645; face 2; breech 14; fe[illegible]; arm 3, shoulder 1; [illegible] 7; twin cases 12; total 691.

"In two of the twin cases the breech presented, in two others the head; in one the first child presented with the head, the second with the feet; in another [illegible] first child with the breech, the second with the arm, the other six were presentations of the head and breech.

"The following table exhibits the number [illegible] births, [illegible] the sex of the children, arranged according to the age of the m[illegible]er, from [illegible]een [illegible] inclusive, taking an average of every five years.

From	Males.	Females.	Total of Births.	Still born.		Total Still born.
				Males.	Females.	
15 to 20	19	15	34	2	2	[illegible]
20 to 25	114	93	207	14	6	20
25 to 30	100	88	188	9	7	[illegible]
30 to 35	106	79	185	10	2	12
35 to 40	33	23	56	1	1	2
40 to 45	15	17	32	0	1	[illegible]
45 to 50	0	1	1	0	0	0
	387	316	703	36	19	55

"Of the still born children there were 29 premature, 2 abortions, 3 arm presentations, 3 natural cases, 3 crotchet cases, 4 cases of prolaps[illegible] of the funis, 3 feet presentations, and 4 breech ditto. of the 12 cases of twins, four children were still born, making a total of 55 deaths. Premat[illegible] labour is a circumstance of very frequent occurrence among the women residing in this district of the city, owing to their irregularity of living, and the brutal treatment they often receive from their husbands.

"Of the arm cases, one did not come into hospital [illegible]ty-four hours after the waters had drained off, and the child had been [illegible]ed into the pelvis by the violent action of the ute[illegible], which continued after her admission, so as to render turning impracticable. Spontaneous evolution, (as it is termed by Dr. Denman,) took place in this case in nine hours after her admission. The patient recovered without a bad symptom.

"Another was admitted in the eighth month of pregnancy; she was seized with labour the day before, and the waters had been discharg[illegible] for four hours previous to her admission No difficulty, however, was experie[illegible] turning, and the woman recovered rapidly."

The third arm case was a second child in [illegible] instance of twins.

"Of the crotchet cases.—The operation in one instance was [illegible]ourse to in conseque[illegible] of deformed pelvis, and the length of time she [illegible] been in labour previous to her admission, besides which there were uneq[illegible]cal evidence of the child's death. The operation was performed with ease, and the child extracted with perfect safety to the mother, but very unfavourable symptoms soon showed themselves, and ultimately sloughing of the neck of the uterus and adjoining parts took place, which caused her death fourteen days after delivery.

"Ano[illegible] was a soldier's wife, who had been in labour four d[illegible] previous to her bei[illegible]t into hospital, during which time she said she ha[illegible] not passed water: the bladder was greatly distended. The operation of e[illegible]otomy was had recourse to immediately after her admission; the head be[illegible]o impacted in the pelvis as to prevent the use of the forceps. When the child was extracting, it was found to be very much enlarged from putrefaction: she lived [illegible]

nearly three weeks having laboured under a continued hoarseness, and nearly loss of voice. These symptoms existed at the time of her admission. On examination after death there was ulceration of the chordæ vocales, and evident inflammation of the mucous membrane of the bronchial tubes. The uterus had two small abscesses in its substance. The third was operated on in consequence of the length of time, eighteen hours, the head had been in the cavity of the pelvis, without the slightest advance, though the labour-pains continued violent, and after the forceps had been tried. This woman speedily recovered.

"Of the funis presentations.—Two cases occurred in women who had come a considerable distance on foot, from the country, to be confined; a large portion of the cord was down, and pulsation had ceased previous to admission.

"In the third case of funis presentation, the discharge of the waters, and the falling down of the funis were the first symptoms which attracted the patient's notice, the former having fallen considerably below the external parts without any [illegible]ous pain.

"Of the [illegible] cases, one was an acephalous fœtus, and the cord presented along with the foot. Of the breech presentations, three were cases of premature labour.

"The following is a brief account of the remaining seven cases of death which occurred:—

"Mary No[illegible] died of rheumatic fever a fortnight after delivery.

"Mary Cullen died of hæmorrhage, occurring immediately after the expulsion of the child. Her death was almost instantaneous.

"Margaret Butler died in consequence of inflammation of the uterus and some of the adjacent parts.

"Judith [illegible] was extremely delicate on coming into hospital. Inflammation and sloughing of the upper and inner part of the uterus took place, which was not suspected during her lifetime; after death, on cutting into the diseased part, (which was not much greater in extent than the size of a crown piece, it had much the characters of anthrax.

"Mary M'Dermot died of consumption three days after delivery, which she had been labouring under for a long period previous to her admission.

"Mary [illegible] was admitted on the night of the 24th of July, 1830, and was delivered in [illegible] hours after. She was so ill from chest disease, apparently phthisis, that it was thought she could not survive the delivery. She died three hours afterwards; no examination was allowed.

"Judith [illegible] was labouring under bronchitis on her admission, which rapidly increased after her delivery: she sunk in two days.

"In one instance premature labour was induced, in consequence of contracted pelvis, in a woman named Mary Fox, of diminutive stature. About fourteen hours after the evacuation of the liquor amnii, she had a severe rigor, which lasted for an hour. In twelve hours after, slight labour pains occurred, these continued for about nine hours, when she was delivered. The child was born alive, but died in an hour.—*Dublin Hospital Reports, Vol. V.*

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64. *Influence of certain occupations on the development of Phthisis Pulmonalis.*—M. Benoiston de Chateauneuf, has communicated to the Royal Academy of Sciences of Paris, some very interesting statistical researches on this subject. From the report of M. Dumeril, made at the meeting of the sixteenth of December last, we derive the following particulars.

Those persons engaged in the construction of gun-flints, first engaged the attention of M. Benoiston. He had understood that the mortality among this class of workmen was very great, principally attributed to the frequent development of phthisis pulmonalis, or by the destruction of the lungs, by suppuration. This branch of labour is carried on in the environs of St. Aignan, in the commune of Meusnes. M. B. has consulted the registers of this commune, and during a period of sixteen years, (from 1812 to 1828,) he has noticed 700 births and 515 deaths. He afterwards obtained two necrological tables of the

same village, for two periods of thirty years [illegible]; one [illegible]re, and the other since the establishment of the man[illegible]cture [illegible] gun-flint[illegible] In the first, from 1680 to 1709, the mean population was 415 souls; the bir[illegible] were the[illegible] 1 to 24.08; the deaths as 1 to 33.24, so that the mean duration [illegible] life was nearly twenty-four years and three months. But from 1760 to 1790, a period at which the manufacture was in operation, the mean population was 1850 souls: the births were 1 in 22.78; and the deaths 1 in 29.60; so that [illegible] generation was reduced one-half before five years, instead of nineteen years and two months This great mortality will naturally be attributed to the continu[illegible] inspiration of the dust, which is produced in forming the gun-flints.

M. Benoiston has pushed his researches further, and endeav[illegible]ed to ascertain the influence of various occupations, which expose those engaged in it, either to an atmosphere charged with dust, or to laborious exertion or constrained postures.

These occupations, to the number of forty, are divided i[illegible]en classes the males and females are considered separately. From the [illegible] of three of the hospitals of Paris, in which 43,010 patients were admitte[illegible]ithin five consecutive years, from 1821 to 1826, Mr. B. has made out the follo[illegible] statement:

1st. Professions which subject the lungs to the action of [illegible] at[illegible]here charged with vegetable particles.

Males.	Starch makers, died of pulmonary consumption,				1.[illegible]2 per cent.
	Bakers,	"	"	"	2.07
	Colliers,	"	"	"	3.[illegible]3
	Porters,	"	"	"	2.[illegible]
	Rag pickers,	"	"	"	0.[illegible]
	Workers in cotton,			"	1.88
	Winders,	"	"	"	——
	Spinners,	"	"	"	2.35
	Mean mortality,	"		"	2.07
Females.	Rag pickers,	"	"	"	1.[illegible]
	Workers in cotton,	"	"	"	2.72
	Winders,	"	"	"	3.42
	Spinners,	"	"	"	1.61
	Mean mortality,	"	"	"	2.[illegible]9

2d. Professions which subject the lungs to the action of mineral particles.

Males.	Quarriers,	"	"	"	[illegible].46 per cent.
	Masons and hodmen,		"	"	2.22
	Marble cutters,	"	"	"	1.25
	Plasterers,	"	"	"	2.53
	Stone cutters,	"	"	"	0.9[illegible]
	Mean mortality,	"	"	"	1.95

3d. Professions which subject the lungs to the action of an atmosphere charged with animal molecules.

Males.	Brush-makers,		"	"	3.53 per cent
	Wool-carders and mattrass-makers,			"	3.10
	Hatters,	"	"	"	4.78
	Feather men,	"	"	"	7.69
	Mean mortality,	"	"	"	4.[illegible]

Females.	Brush-makers, di[illegible] pulmonary consumption,				7.76 per cent.
	Wool-c[illegible]ers and [illegible]ttrass m[illegible]ers,			"	2.43
	Hatters,	"	"	"	0.55
	Feather women,		"	"	11.47
	Mean mortality,	"	"	"	3 39

4th. Professions which expose the lungs to the action of an atmosphere charged with injurious vapours.

Males.	G[illegible]ers,	"	"	"	5.32 per cent
	[illegible]orative painters,	"	"	"	2.17
	Chimney doctors,	"	"	"	3 34
	Mean mortality,	"	"	"	2 87
Females.	[illegible]rs,	"	"	"	5.61

5th. [illegible]ons which expose the body, and especially the lower extremities, [illegible]ion of moisture.

M[illegible]	Bleachers,	"	"	"	1.83 per cent.
Femal[illegible]	D[illegible]o,	"	"	"	4.50

6th. Profe[illegible]s which subject the muscles of the chest and superior extremities to painf[illegible] continual exercise.

Males.	W[illegible]vers,	"	"	"	2.13 per cent.
	Gauze-makers,		"	"	3.18
	Carpenters,	"	"	"	1.49
	Joiners,	"	"	"	3.08
	Blacksmit[illegible]nd Farriers,			"	0.93
	Locksmiths,	"	"	"	0.74
	Water carriers,	"	"	"	2 41
	Sawers of stone,		"	"	1 12
	Mean mortality,	"	"	"	2.12
Females.	W[illegible]vers,	"	"	"	1 84
	G[illegible]e-makers.	"	"	"	3 16
	Mean mortality,	"	"	"	2.64

7th. Professions which subject the muscles of the chest and of the arms to continual action, and the body to bent attitudes.

Males.	Writers,	"	"	"	4.73 per cent.
	[illegible]wellers,	"	"	"	6.23
	[illegible]aylors,	"	"	"	4.67
	Shoemakers,	"	"	"	4.29
	Fringe and Lace makers,		"	"	4.69
	Glass cutters,	"	"	"	[illegible].14
	Polishers,	"	"	"	4.44
	Mean mortality,	"	"	"	4.84
Females.	[illegible]llers,	"	"	"	13.3[illegible]
	[illegible]resses,	"	"	"	4.[illegible]8
	[illegible]emakers,	"	"	"	[illegible]54
	Fringe and Lace makers,	"		"	4 68

Females	Polishers, died of pulmonary consumption,				3.83 per cent
	Embroiderers,	"	"	"	8.60
	Sempstresses,	"	"	"	5.48
	Florists,	"	"	"	——
	Lace makers,	"	"	"	6.20
	Glove makers,	"	"	"	6.46
	Stocking darners,	"	"	"	6.11
	Mean mortality,	"	"	"	5.66

Mean mortality of the whole, 3.61 per cent.—*Archives Générales and Revue Medicale. Dec.* 1830.

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65. *Influence of certain Professions in the Production of Phthisis Pulmonalis.*—Dr. Lombard, of Geneva, has been engaged in some interesting observations on this subject, and his results correspond remarkably with those of M. Bénoiston de Chateauneuf. His documents are derived in part from the [illegible] of the Parisian and other hospitals, and in part from the bills of mortality of the city of Geneva, in which bills the profession of the deceased and the cause of death are carefully registered. Dr. Lombard has observed, that the inhalation of vegetable are much less injurious than mineral powders. Thus, the frequency of death from phthisis being in Geneva, 0.20 in millers, it attains the enormous proportion of 0.67 in plasterers. He has also been struck with the deleterious influence of certain emanations which appears to him to be the cause of this disease in a great number of workmen of a certain description, such as hatters, varnishers of paintings, and enamellers, and he found the mortality from consumption was 0.42 at Vienna, and 0.31 at Geneva, among the hatters; 0.32 in varnishers, and 0.25 in enamellers. Concussions of the thorax appear to exercise little influence in the production of phthisis pulmonalis; he has found that occupations which require considerable movements of the arms are less exposed than others to contract this disease, and that in the ratio of 0.118 to 0.207 in Geneva, and in that of 0.252 to 0.286 in Vienna.—*Archives Générales, Jan.* 1831

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CHEMISTRY.

66. *On the state of Mercury in Mercurial Ointment.* By M. Mitscherlich.—The mercurial ointment employed, occupied four weeks in preparing; part of it was set to dissolve at a moderate temperature in alcohol containing caustic potash in solution. The mercury was separated in the metallic state, and formed one globule at the bottom of the vessel; the solution was filtered, and the metal was carefully removed from beneath the filter; a white matter remained, which was not removed by washing, and which heated in a tube gave no metallic mercury, nor did it sublime.

From this experiment it appears that the ointment does not contain oxide, but metallic mercury. To be certain whether by the reaction of the alcohol and potash the oxide had not been reduced, the following experiment was made:—1.101 gramme of protoxide of mercury was triturated for a long time with lard. The ointment thus prepared was subjected to alcohol, mixed with potash as in the preceding experiment. The portion remaining undissolved, had not the least appearance of metallic mercury, it weighed 1.196: submitted to distillation with muriatic acid, no metallic mercury appeared, but 1.29 gramme of proto-chloride of mercury, equivalent to 1.089 of proto-oxide of mercury. A small portion of the sediment, when heated, did not sublime.—*Philosophical Magazine, Jan.* 1831, *from Hensman's Repertoire, August,* 1830.

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67. *On the Existence of Hydrocyanic Acid in Cheese.*—Dr. Witling has undertaken a series of experiments to ascertain the nature of the changes which

occur in some kinds of cheese, the results of his investigations are the following:—1st. If cheese is well sweated, sufficiently salted, and dried at a moderate temperature, it never acquires poisonous properties. 2d. Its fermentation and alteration is in direct proportion to its moisture, especially when it is kept in a close place. 3d. When exposed to the action of water, and to the sun, in a few days it gives out an ammoniacal odour. In this state, if treated with alcohol, this liquor yields on distillation some traces of hydrocyanic acid; it appears that this acid is united to the ammonia in cheese which has become changed. 4th. At a more advanced period of the fermentation, no trace of this acid is to be found. It therefore appears the deleterious property of some kinds of cheese is owing to the formation in them of hydrocyanic acid.—*Journal de Chimie Médicale, Dec.* 1830.

68. *Analysis of the Pulmonary Exhalation.*—We have already noticed Vol. VI. p. 48[illegible] COLLARD DE MARTIGNY's researches on pulmonary exhalation, and a[illegible] the following is his analysis of the vapour given out by the lung[illegible] has been made since the publication of the memoir formerly notic[illegible] 0.907; carbonic acid, 0.090; animal matter, 0.003. No ammonia was found. This analysis has been repeated upwards of twenty times, and with vapour from the lungs of persons of different ages with the same results. —*Ibid.*

69. *Preparation of Salicine.*—This article appears to be acquiring some reputation in Europe as a substitute for quinine; the following is the process for preparing it, recommended by M. PESCHIER. The bark of the willow is to be dried, crushed, boiled for one or two hours in water, and the liquid separated by a cloth and powerful pressure. Sub-acetate of lead is to be added as long as precipitation occurs; the whole filtered; the clear liquor boiled with enough carbonate of lime to decompose the excess of acetate of lead, saturate the [illegible] acid, and remove the colour Being left to settle, the clear liquor is to be decanted, the deposit washed twice or thrice, the washing liquor added to the former, and the whole evaporated to the consistence of an extract. This extract, whilst hot, is to be put on bibulous paper, and pressed for some hours; after which it is to be digested in alcohol, of s. g. 0.847, the fluid filtered and concentrated, when it will yield crystallized salicine, very white and pure. Salicine thus obtained, when administered in doses of from fifteen to eighteen grains, during the apyrexia of intermittent fevers, is said to have been found effectual in arresting their progress.—*Ann. de Chimie. Vol. XLIV.*

70. *Presence of Manganese in the Blood.*—In some analyses of human blood, according to Engelhart's method, by liquid tests, Professor WURZER, of Marburg, was led to suspect that, besides the usual results, he had also obtained a small quantity of manganese, not being, however, quite sure of the correctness of his analyses, he was induced to repeat them in the following manner:—The blood, which had been obtained by venesection, on the day before the experiment, was ignited in an open crucible, the incinerated mass oxydized by nitre, and then diluted with water, the residuum was dissolved in muriatic acid, and the iron precipitated from the solution by succinate of ammonia. As the precipitate contained also some phosphate of lime, it was again ignited, and then dissolved in muriatic acid; the phosphate of lime was separated from the solution by alcohol, the excess of the latter expelled by heat, and the iron precipitated by ammonia. By boiling the filtered liquid with carbonate of soda, the manganese [illegible] precipitated, and then dissolved in nitric acid, and again ignited. In two [illegible]es of the coal was found 0.108 ox. of iron, and 0.034 protox. of manganese.—*Journ. of the Royal Institution of Great Britain, Feb.* 1831, *from Poggendorff's Ann. der Physik und Chemie.*

MISCELLANEOUS.

71. *Case in which several Leeches were Swallowed.*—Dr. Schnuhr reports the case of an individual who, while in the act of bathing, accidentally swallowed several leeches. The immediate consequences were intense burning of the stomach, loss of appetite, sickness at stomach, and frequent discharges of blood by vomiting, with which one of the animals was ejected on the third day. Pale and emaciated, he applied for relief on the eighth day. The physician directed him to take a saturated solution of muriate of soda, to be followed in three-quarters of an hour by a dose of ol. ricini. This had the effect of bringing away three leeches, after which the vomiting of blood and pain of the stomach subsided.—*Hufeland and Osann's Journ. für Pract. Heilkunde, B. 70, Stuck.* 2.

72. *Acoustic Chair.*—Mr. Curtis, of London, Surgeon to the Royal Infirmary for Diseases of the Ear, has invented an acoustic chair for the benefit of persons afflicted with deafness. The chair is of the library form, with high back and sides, and the chief parts of the acoustic apparatus are concealed in the stuffing—all that is visible being a mouth piece on the outside near the top, and a small tube on the inside for applying to the ear. Mr. C. intends taking out a patent for his invention, and the mode of construction of his chair is, therefore, as yet not made known; as soon as it shall be so, we will present an account of it to our readers.

73. *Connexion of Diseases with the Rock Formations of a Country.*—Amongst a great many of the communes of Calvados, in France, near to each other, and exposed to the same climatic influences, there is one which is particularly liable to fever. Nearly the whole of these communes are situated upon lias and red marl, and some other clayey formations, which retain at the surface a humidity favourable for the formation of fogs. On the contrary, the communes situated on rocks having a loose texture, and which permit the rain water to escape more easily, such as the great oolite, chalk, &c. or which do not present any beds capable of arresting the course of the water, as granite and certain slates, appear less liable to fevers. It results from these general considerations, that the soil, by its greater or less hygroscopic quality, may have an effect on the state of health, by favouring more or less the development of certain diseases. M. de Caumont does not regard this observation as new, but communicates it with the view of ascertaining in what proportions, (every thing being equal,) the fevers and other maladies are developed in the principal geological regions of Calvados; for example, in that of granite, slate, limestone, clay, &c.—*London Med. and Phys. Journ. Jan.* 1831, *from the Journal de Geologie.*

AMERICAN INTELLIGENCE.

Medical Statistics of the Moravian Society, established at Bethlehem, Penn.—We are indebted for the following highly interesting statement, derived from the church records of the Moravian society, established at Bethlehem, Penn. to our learned and valued friend, LEWIS D. DE SCHWEINITZ.

From the first of January, 1801, to the first of January, 1831, a period of thirty years, 386 deaths have occurred in this congregation, forming a population which increased during the period from 501 persons, to 722 persons.

Of the [illegible]mentioned 386 persons, *non* obtained the age of 100 years.—

6	died	[illegible] above	90 years.							
55	died	[illegible] between	80 and 90 years,	above	80 years of age	61.				
83	"	"	70 and 80	"	"	70	"	144	under	24[illegible]
68	"	"	60 and 70	"	"	60	"	212	"	174.
38	"	"	50 and 60	"	"	50	"	250	"	136.
18	"	"	40 and 50	"	"	40	"	268	"	118
14	"	"	30 and 40	"	"	30	"	282	"	104.
19	"	"	20 and 30	"	"	20	"	301	"	85.
9	"	"	10 and 20	"	"	10	"	310	"	76
76	"	"	0 and 10							

It appears, therefore, that the decennium of human life in which the greatest number of deaths occurred was between 70 and 80 years, viz. 83 deaths out of 386, while the deaths under 10 years were only 76 out of 386. A considerable majority of deaths were of persons above 60 years of age, and more than double as many over 40 than under.

In the same period 350 births took place.

Of the inhabitants of Bethlehem alive on the 1st of January, 1831, there were 14 above 80 years, 48 above 70 years of age, 226 under 12 years.

In the above statement of the population, the boarding school for young ladies is not included. This has been established since the year 1785, and between 1900 and 2000 scholars have lived in it successively during this period of 46 years. 12 deaths have taken place among this number, which are not included in the above statement.

Treatment of Dyspepsia. By J. E. COOKE, M. D.—In the review of the Pathology and Therapeutics of Dr. Cooke, which will be found in another department of this number, the extent to which the author of that work administers purgatives in the treatment of dyspepsia, is spoken of, but the quantity said to be taken in some cases, is so extraordinary and unparalleled in the records of medicine, that it would be impossible for the reader to form any notion of the practice, without an example: we therefore extract two cases from the second volume of the work, and that the author may be fairly represented, we shall quote them at full in his own words.

"CASE I. A lady of thirty or thirty-five, delicate form, pale complexion, had had for some years all the symptoms of dyspepsia, in a high degree; had a great deal of [illegible] in the stomach, and severe pains in it and the neighbouring parts; frequ[illegible] vomited, sometimes a viscid acid fluid, and sometimes a limpid tasteless fl[illegible], and was very much troubled with wind in the stomach; had been compelled to restrict herself to a few articles of diet, and with all her [illegible] suffered excessively. She had, in addition to these symptoms, pain in the [illegible], right side, between the shoulders, through the chest, and in the kidneys,

She had palpitation, a pulsation at the top of the sternum sometimes, and one in the abdomen frequently. She had also slight convulsive motions in the muscles of the hand and fore-arm. Her pulse was very weak and slow.

"She had, on the day I was first called, taken an emetic, which had operated smartly, and she had thrown up a small quantity of blood of a black colour; on which account she had desired my assistance. She was advised to make an effort to obtain relief from the whole of the symptoms, and not to be satisfied with temporizing: to which no objection being made that need be mentioned, she immediately commenced by taking a mercurial cathartic, and on the next day another.

"Nov. 28. Finding the medicine had not operated well, she took of scammony thirty grains, and calomel ten. Nov. 29. Took scammony forty grains, aloes twenty, in pills; and as the operation was slow, it was aided by calcined magnesia Nov. 30. Took scammony twenty grains, aloes five grains, calomel ten grains, in four pills: magnesia calcined, half an ounce. Little or no operation yet.

"Dec. 1. Took scammony, aloes, and calomel, six pills. The aloes was employed, because to rhubarb she had an utter aversion. Dec. 2. Took calcined magnesia and senna; not weighed but marked large doses. She took three or four times as much as common to operate: as one ounce of senna, or half an ounce of magnesia. Dec. 3. Took scammony sixty grains, jalap thirty grains, in twelve pills. magnesia a large dose. Dec. 4. Took scammony seventy grains, in pills: magnesia a large dose. For the last four days the passages, (there were several every day,) consisted entirely of black blood. On one day the chamber pot was half full. The friends were all much alarmed at first, but being assured that I had never experienced any other than a salutary effect from such discharges, and finding that she actually was considerably relieved, they were satisfied.

"Dec. 5. She took of scammony twenty grains: of magnesia a large dose. The discharges to-day, a medium between black blood and black-green bile. Dec. 6. Took scammony and calomel, twenty and ten: a large dose of magnesia. The discharges, a pure black-green bile, colouring the sides of the pot as it was moved from side to side, of a yellow colour. Dec. 7. Took scammony and calomel, twenty and ten: magnesia. 8th. Took nothing. 9th. Magnesia alone. During these three days the discharges changed to a yellow, and she was able to go about, greatly relieved in every particular, indeed considering herself so well as to neglect my urgent request, that she would for some time, take medicine sufficient to procure at least two passages a day.

"Dec. 14. However, in consequence of this neglect, she had a return of the symptoms with great violence. She had an excessive quantity of acid in the stomach; violent vomiting, the struggle being actually alarming; pains in the stomach and bowels, the sternum, the shoulders, or towards the shoulders and back, the liver, and kidneys. Took in the night six pills of scammony, rhubarb, and calomel.

"Dec. 15. Six pills of jalap, aloes, and calomel. 17th. Four pills of the same. 18th. Scammony, twenty grains. 19th. Jalap and aloes, four pills. These medicines operated pretty well, and she improved daily in every respect.

"From December 19th to the 29th she took medicine occasionally only; in all, of aloes, eighty grains; of jalap, twenty; and one dose of senna. The acid gaining head, she took on the 30th, magnesia with a little soda, and twelve grains of aloes. Dec. 31. Senna and magnesia.

"Jan. 1. Magnesia. 2d. Senna and magnesia. The discharges from these medicines were all light coloured and thin, and she was getting worse; so as again to request my attendance.

"Jan. 3. Scammony, twenty grains. 4th. Scammony and calomel, two doses. 5th. Senna and magnesia. 6th. Scammony and calomel, ten grains of each, and some magnesia 7th. Scammony and calomel, of each twenty grains.

and some magnesia. The magnesia in almost every instance, was of her own prescribing; which she, through desire of present relief, took in place of repeating the scammony, when the first dose did not operate. The discharges were still light coloured and thin, and she was rapidly getting worse. This consequence was urged upon her, and she was at length convinced, to use her own words, 'that nothing but thorough work would do,' and was determined to give up the magnesia.

"Jan. 8. She was by this time very low. She took eight pills of jalap, aloes, and calomel, with two of scammony and calomel, which I had about me, to make out a dose.

"Jan. 9. Sundry cathartic pills with calomel at several times in the day. 10th. Twelve pills of rhubarb, aloes, and calomel. 11th. Sixteen pills of jalap, aloes and calomel. For the first two days, she was in excessive pain in the stomach, &c. the medicine not operating until to-day; but she resolutely withstood the inclination to take magnesia. This day, the discharges became black and free, and she felt decided relief. During the time that elapsed from the 8th, until the medicine operated, she suffered most severe, most excruciating pains. There were moments when her sufferings were awful. Several friends were constantly engaged about her in restraining her from injuring herself, by her tossing about, and occasionally in holding her up in bed. On one occasion, while thus supported, she fainted in their hands with excess of pain, and such was the intense and almost intolerable anxiety and agitation, that her death would undoubtedly have been a relief to their feelings. During this period, staying much with her for the sake of observation as well as attention, I observed that when the pain was most excruciating, the pulse was very low, and that when she was easy the pulse was full. It was immediately determined to support the pulse with hot brandy toddy, until the mercurial cathartics, now freely used, should act not only on the bowels but on the pulse, as they generally do in a few days. The relief was instant on the first trial of the brandy. In a few minutes she was lying quite easy, when it was a matter of surprize to find, although it was expected, and the treatment was planned on the expectation, that the pulse was full and soft. The only dread I had entertained, was that she would die before the medicine could have time to act. I now thought [illegible]in my reach, though all around considered her death inevitable. She took after this time, hot toddy whenever in pain, and relief was obtained generally in a few minutes. After the medicine had operated as above stated, (11th) producing free black passages, the pulse became more uniform, the necessity [illegible] brandy ceased, and it made her sick to take it.

"During several days following the 11th, she took large doses of mercurial cathartics, which operated freely; the passages, at first black, became next deep green, and finally yellow; and she mended every day. During this operation, she for several days felt severe pain, which the attendants frequently mistook for the original pains; but it was evident to me that they were caused by the griping of the medicine, and the acrid nauseating bile discharged. She herself clearly distinguished between them. The original was excruciating, and seated in the different parts above mentioned; the latter was in the bowels alone; and from the attendant motions of the bowels, from the nausea, and its being shortly followed, when severe, by a passage, could not be from any other cause than the one assigned. During these days she took very large doses of medicine; this was necessary; it was fully ascertained by many trials, that nothing short of what was given would effect the purpose. She took on the 12th, in pills, seventy grains of scammony, and forty of calomel. On the 13th, scammony, sixty [illegible] grains; calomel, thirty-two grains; rhubarb, ten grains.

"Jan. 1[illegible]een pills of the same. 15th. Twelve pills of the same, except the calomel. 16th. Scammony and calomel, forty and twenty, with some senna. 17th. Scammony and calomel, of each twenty grains; scammony and rhubarb, sixteen pills. Pills, when the weight is not stated, contain almost universally five grains each. During this time she improved every day; was

not troubled with acid after the 12th; and vomited only now and then on taking the jalap pills.

"Jan. 18. Ptyalism appearing, and wishing to substitute some other excitant for the calomel, directed her to take columbo, which she did for some days, together with the cathartics, but did not take much. 19th. She took jalap, aloes, and calomel, twenty-four grains of each. 20th. Jalap and aloes, of each thirty grains. 21st. Jalap, fifteen grains. 22d. Jalap, thirty grains. 23d. Jalap, fifteen grains. Some return of pain in the course of the day; took eight pills of jalap, aloes, and calomel. 24th. Twelve of the same. 25th. Jalap sixty grains. 26th. Considerable pain this morning. On enquiry found the attendants had given the pills faster than directed; in consequence of which, instead of a few loose consistent yellow passages, she had a number of thin and watery ones: after which the pain came on. Something of the same kind occurred, it will be seen on looking back, on the 23d, after taking for three mornings jalap, without aloes or calomel: and the same occurred to a much greater extent after taking magnesia and senna for some time in the commencement. In consequence of the return of pain, though the mouth was sore, she took calomel with her pills.

"Jan. 27. Apprehending that the mouth would become very sore, determined to use the nitrate of silver, which I had often used with jalap and aloes, instead of calomel, and had found to act very much like it, not only in affecting the appearance of the discharges, but in raising the pulse: one grain of the former, however, being equal to ten of the latter in effect. During this and the three following days, she took, each day, four pills at intervals in the morning, when the pulse was lowest; each pill contained of jalap, two grains; and of the nitrate of silver half a grain. The medicine did not act sufficiently, and raised the pulse very much, producing head-ache.

"Jan. 31. Took scammony and aloes, of each ten grains, and of the nitrate of silver half a grain, in four pills at once.

"Feb. 1. The mouth having become less sore, took eight pills of jalap, aloes, and calomel. 2d. Six pills. 4th. Five pills of scammony, aloes, rhubarb, and calomel. 6th. Three pills of the same. The discharges became natural in consistence about the 21st of January. The appetite has been for some time very good; no acid, (see Jan. 17;) no vomiting; no pain; no water brash; strength returning; colour good and healthy. Continued to take pills of rhubarb and aloes occasionally, after my attendance ceased. March 17th. She has taken her pills only occasionally since last date; but often enough to procure a habitual discharge twice a-day from the bowels. She continues well; her colour usually pale, is now quite good; eats those things which she could not formerly indulge in; indeed eats any thing; apples being mentioned as the only thing which produced any uneasiness in the stomach; uses coffee, which until lately, she dare not touch.

"August. Has had this summer a continued discharge from the bowels of a bilious appearance. Her colour is still quite good, and she is more fleshy than she has been for many years."

Case II. A man residing near a mill-pond, had an ague and fever in 1807: after getting rid of the fever he continued pale, his liver and spleen were swelled, and he had a cough. The patient was subsequently attacked with the ordinary symptoms of dyspepsia; and the author gives a very brief detail of the progress of the disease, from the attack up to the summer of 1825; which, as it does not bear immediately upon the treatment subsequently pursued, we shall omit. We have indeed to regret that this account is so brief, and that no information is furnished as to the treatment adopted for the [illegible] of the fever, so as to enable us to form a positive opinion as to any influence the remedies employed for the cure of the fever, may have had in laying the foundation of the subsequent disease. If, however, the purgative plan recommended [illegible] our author, was employed, there would be much ground to suspect that the disease was induced by the use of the remedies; as one of the most common

cases for which we are here c[illegible]ted, by patients from the south and west, are the various forms of chronic irritation and disorganization of the abdominal organs, induced by the remedies employed for the cure of the fevers of those sections of our country.

In April, 1825, this patient came to Winchester. "At that time he had a small passage every morning, pale yellow bordering on clay colour, rather firm to pass easily; stomach flatulent; no acid for near a week, but could not take any nourishment but milk and water with a little loaf sugar, and a cracker: no meat but lean [illegible]. This was his meal, morning, noon, and night. He could not even drink water in the interval of meals, as it disordered his stomach."

For ten weeks, pills of rhubarb, aloes, and calomel, rhubarb and calomel, and aloes and calomel, according to circumstances, were constantly given, during which time the patient "took about half an ounce of calomel," with apparent benefit.

About the last of July, Winchester became sickly, and the patient is said soon to have felt its effects. "his complexion became very dark; stomach disordered, [illegible] to drink water, though troubled excessively with an internal burning a[illegible]t thirst: his passages became almost as thin as water; and he was so we[illegible] was confined to his room, lying on the bed chiefly

"July [illegible]en grains of calomel alone 28th. Ten grains of calomel not bei[illegible] active enough, took on the 29th. ten grains of calomel, with five o[illegible]barb; the three following days, twenty grains of calomel, with ten of rhubarb each day: the bowels not being sufficiently moved by these doses, they were gradually increased, so that on the second of August he took ten grains of rhubarb, and thirty of calomel, 3d, of rhubarb fifteen grains, and thirty of calomel; 4th and 5th, of rhubarb and calomel, of each thirty grains, on both days; 6th and 7th, forty grains of each on both days; 8th, of rhubarb fifty grains, and forty of calomel; 9th, of jalap and rhubarb, of each twenty grains, with forty of calomel, 10th, the jalap producing nausea, he took of scammony twenty grains, rhubarb twenty, calomel forty grains. The passages from all these medicines were dark green, thick and consistent, about two a day. [illegible]omplained most of weakness when there was no passage, and after the second operation of the last dose, felt greatly benefited in his feelings. His [illegible] was always fuller when there was an operation. The large doses produced no more passages than the small, but the passages were larger, except that the discharges were freer from the jalap and scammony on the 9th and [illegible]eing larger and more numerous, on which occasion he experienced the [illegible]d benefit above stated. It is to be observed, that the necessity for large doses was not co[illegible]d to him; but that in this season it was a general observation among physicians, that [illegible]mmonly large doses were requisite to produce the usual effect on the bowels.

"Aug. 11. Took this day of scammony and rhubarb, of each twenty grains, [illegible] twenty of calomel, which operated well, passages green; appears better [illegible] thinks himself so; has had for two or three days a great desire for pickles [illegible] much [illegible]ting, though he has taken nothing for many days but milk and [illegible], with a [illegible]e sugar. Took in the course of the day, one-third of a drachm [illegible]uriatic acid in a quart of water. 12th. Slept well; drank this morning a [illegible]derable draught of boiled milk, which he relished. Took jalap and aloes, [illegible] pills; puked him violently, operated indifferently; two-thirds of a [illegible] the same acid in the course of the day: feels very weak. 13th, 14th, [illegible]. Took of scammony and rhubarb, each forty grains, with thirty of [illegible] on each day.

[illegible]19th. Took rhubarb eighty grains, calomel forty every day. [illegible]rb ninety grains every day. All these medicines operated in [illegible]ner, excepting that the passages were small. There were [illegible] three to five passages a-day, of nearly black, viscid thick matter.

[illegible]3d. The operation being small, tried jalap again. He took jalap sixty [illegible] and calomel thirty. All these medicines, except the senna and magne-

sia, were given in the shape of pills; and he [illegible] [illegible]st instances, took the whole in a few minutes as one dose. The last pills were immediately thrown up; soon after gave him calcined magnesia, as there seemed to be a necessity for something to act more freely than the rhubarb and calomel did, both on account of the black matter which ought to be evacuated, and the fear of ptyalism. 24th. Scammony and calomel, of each thirty grains, magnesia calcined, eighty grains; through the day the discharges were black and thick; while this black matter was passing, there was great nausea. 25th. Magnesia alone, twenty heaped tea-spoonfuls in the course of the day, in [illegible] doses; several large black and more fluid discharges, very offensive. 26th. Took scammony thirty-two grains, and calomel sixteen: also eight heaped tea-spoonfuls of magnesia in two doses, passages thick, tenacious, not so dark. 27th. Took scammony sixty grains, calomel thirty; magnesia repeatedly; one yellow passage, thick and tenacious. 28th. Scammony eighty grains, calomel forty; magnesia twenty-four tea-spoonfuls heaped; yellowish thick passages. 29th. Scammony eighty grains, calomel forty; no magnesia; no operation. 30th. Early this morning, two darker, thick, tenacious passages. In the evening, took scammony fifty-four grains, calomel twenty-seven. The same d[illegible] prescribed as for yesterday; but he only took eight of the twelve lar[illegible] into which the scammony and calomel was made.

"31st. He took scammony twenty-seven grains, and calomel thirteen, and sixteen tea-spoonfuls of magnesia: to-day he had two yellow, thick, tenacious passages. This change to yellow being evidently the consequence of the administration of magnesia, I determined to omit it, though he had taken much calomel, and run the risk of ptyalism without this medicine the discharges were not dark, and when they ceased to be of that colour, his countenance immediately blackened, and he felt weaker and oppressed; so that he begged for something to bring off the black matter, which he was always glad to see. At this time he was very thin; and though he ate very little, he had for some time indulged in things which a few weeks before he could not have touched; viz. toast buttered, and soft bread and tea.

"Sept. 1. Took early in the morning scammony two drachms, [illegible] calomel one drachm. the magnesia being omitted, the scammony was necessarily increased: he had three or four moderate passages, reddish or deep orange coloured, tenacious, and thick.

"Sept. 2 to 6. Scammony one drachm, calomel half a drachm, every day dark passages every day. 7th. Jalap, aloes, and calomel, each one drachm. The nausea having disappeared, jalap was substituted for the scammony. [illegible] prehensive of ptyalism from the quantity of calomel he [illegible] taken, he took magnesia, twelve tea-spoonfuls at two doses in the cou[illegible] of the day. Passages still dark; appetite less and less, till he ate nothing, and drank nothing the whole day.

"8th. Jalap and aloes, of each one drachm, calomel half a drachm; passages not so dark. 9th. Jalap and aloes, of each one drachm; magnesia two doses, passages lighter. 10th and 11th. The same medicines, with the same effect: For some days two or three passages in twenty-four hours. 12th. Jalap and aloes, of each eighty grains, with magnesia; four or five large, thick, reddish passages, the last one yellow.

"13th. He had taken his medicine late yesterday, and was kept awa[illegible] night. This morning felt weak, pulse very weak; complained that [illegible] was painfully oppressed. Gave him hot French brandy toddy till [illegible] filled; his colour returned; his pains were gone; he wanted to eat, and [illegible] thickened milk, which agreed well with him. 14th. Jalap [illegible] aloes, of [illegible] forty grains; no magnesia. 15th. About day-light a small y[illegible] [illegible]fectly natural; appetite increasing; no medicine.

"16th. One passage about three o'clock, (afternoon,) large, soft, a[illegible] fectly natural in colour. Eats heartily of thickened milk, a pint at [illegible] three meals a day tried beef soup, it made him feel sick, but prod[illegible]

other inconvenience; no medicine. 17th. From this time till the end of the month, took pills occasionally; in all, of jalap one hundred and fifty grains; of rhubarb one hundred and ten grains; of aloes two hundred grains, and calomel forty grains.

"The discharges were in general natural, sometimes somewhat dark; but the appetite, contrary to all my experience, declined: so that instead of taking, as on the 16th, &c. a pint of thickened milk at a meal, three times a day, he was satisfied with half a saucer-full twice a day."

The case being of long standing, Dr. C. "began to think the stomach had become so disordered, that although the cause, accumulation of blood in the venous cavity, seemed by the passages to be removed, the proper secretion would not go on;" and he therefore determined to try the bark, which, however, produced no benefit. It being ascertained that since the recovery of his appetite, the patient indulged in toddy five or six times a day, he was ordered to give it up; after which his appetite improved. In November he again took improper diet, and his appetite rapidly declined. In the course of a fortnight "his appetite was prostrated:" "the discharges from the bowels increased in number, and became thin and abundant," and about the first of December he died. "His relapse and death," says Dr. C. "were clearly caused by improper diet, and the use of brandy."

It must be remarked, that it is acknowledged by Dr. Cooke, that these extraordinary doses have not been *necessary*, except in the cases which he cites, and two of which we have copied.

The Study of Anatomy Legalized by the Legislature of Massachusetts.—We have been favoured by one of our colleagues in Boston with the able "Report of the Select Committee of the House of Representatives, on so much of the Governor's Speech at the June session of 1830, as relates to Legalizing the Study of Anatomy;" and we congratulate our friends in Massachusetts on the passage of the following bill, which is nearly the same as that reported by the committee, entitled "An Act more effectually to protect the Sepulchres of the Dead, and to legalize the Study of Anatomy in certain cases.

"Sect. 1. *Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same,* That if any person not being authorized by the board of health, overseers of the poor, or select men in any town of this Commonwealth, or by the directors of the house of industry, overseers of the poor, or mayor and aldermen of the city of Boston, in said Commonwealth shall knowingly or wilfully dig up, remove, or convey away, or aid and assist in digging up, removing or conveying away, any human body, or the remains thereof—such person or persons so offending, on conviction of such offence in the Supreme Judicial Court of this Commonwealth, shall be adjudged guilty of felony, and shall be punished by solitary imprisonment for a term not exceeding ten days, and by confinement afterwards to hard labour for a term not exceeding one year; or shall be punished by a fine not exceeding two thousand dollars to enure to the benefit of the Commonwealth, and by imprisonment in the common jail for a term not exceeding two years at the discretion of the court, according to the nature and aggravation of the offence.

"Sect. 2. *Be it further enacted,* That if any person shall be in any way, either before or after the fact, accessary to the commission, by any person or persons, of the offence described in the first section of this act, such person or persons shall be adjudged and taken to be principals, and shall be, on conviction in the court aforesaid, subject to the same punishments and forfeitures as are in said first section provided.

"Sect. 3. *Be it further enacted,* That from and after the passing of this act, it shall be lawful for the board of health, overseers of the poor, and selectmen, of any town in this Commonwealth, and for the directors of the house of industry, overseers of the poor, and mayor and aldermen of the city of Boston,

in said Commonwealth, to surrender the dead bodies of such persons, except town paupers, as may be required to be buried at the public expense, to any regular physician, duly licensed according to the laws of this Commonwealth,—to be by said physician used for the advancement of anatomical science; preference being always given to the medical schools that now are or hereafter may be by law established in this Commonwealth, during such portions of the year as *such* schools, or either of them, may require subjects for the instruction of Medical Students:—*Provided always*, That no such dead body shall in any case be so surrendered, if, within thirty-six hours from the time of its death, any one or more persons, claiming to be kin, friend, or acquaintance to the deceased, shall require to have said body inhumed; or, if it be made to appear to the selectmen or overseers of the poor of any town in this Commonwealth, or to the mayor and aldermen or overseers of the poor of the city of Boston, that such dead body is the remains of a stranger or traveller, who suddenly died before making known who or whence he was: but said dead body shall be inhumed, and, when so inhumed, any person disinterring the same for purposes of dissection, or being accessary, as is described in the second section of this act, to such exhumation, shall be liable to the punishments and forfeitures in this act respectively provided.—*And provided further*, that every physician so receiving any such dead body, before it be lawful to dissect the same, shall in each case give to the mayor and aldermen of the city of Boston, or to the selectmen of any town of this Commonwealth, as each case may require, good and sufficient bond or bonds, that each body by him so received, shall be used only for the promotion of anatomical science; that it shall be used for such purposes only in this Commonwealth, and so as in no event to outrage the public feeling; and that, after having been so used, the remains thereof shall be decently inhumed.

"Sect. 4. *Be it further enacted*, That from and after the passing of this act, it shall be lawful for any physician duly licensed according to the laws of this Commonwealth, or for any medical student under the authority of any such physician, to have in his possession, to use and employ, human bodies, or the parts thereof, for purposes of anatomical inquiry or instruction.

"Sect. 5. *Be it further enacted*, That nothing in this act shall be so construed, as to give to the board of health, overseers of the poor, or selectmen, of any town in this Commonwealth, or to the directors of the house of industry, overseers of the poor, or mayor and aldermen, of the city of Boston, in said Commonwealth, any power to license the digging up of any dead human body, or the remains thereof, other than was possessed by them before the passing of this act, or is given them by the third section of this act.

"Sect. 6 *Be it further enacted*, That the act passed March 2, 1815, entitled 'An Act to protect the Sepulchres of the Dead,' and also all other Acts, or parts of acts, contravening the provisions of this act, be and the same hereby are repealed.

"*Approved by the Governor, February 28th.*"

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Constitution of the General Medical Society of Ohio.—On the 26th of February, 1824, the legislature of Ohio passed "An Act to incorporate Medical Societies, for the purpose of regulating the practice of Physic and Surgery in this State." By the 1st section of this act, the state is divided into twenty districts, which by an amendment in 1827, is increased to twenty-two. The 2d section designates the persons who shall constitute the first society. The 3d section indicates the period and place at which the first meeting of the society shall be held. The 4th section points out the method of organizing the society. The 5th section provides for the election of censors and points out their duties. The 6th section fixes the last Tuesday in May as the period of the annual meeting. The 7th section requires that every physician and surgeon resident in the state previous to the first meeting of the society, having a license or diploma from any regularly organized society or college, who has attended a course of

dical lectures, or shall produce evidence of having been reputably engaged in the practice of medicine for three years previously to the last Tuesday of May, 1824, shall be admitted a member of the society. The 9th section provides for the election of a treasurer, and points out his duties. Section 10 requires "that every person who may be hereafter licensed to practice physic or surgery in this state, shall deposit a copy of his license with the clerk of the court of common pleas, in any county wherein he may reside; and until such copy shall be so deposited, he shall be liable to the penalties of this act, in the same manner he would be liable, if he had not obtained such license; and he shall pay to the clerk with whom he shall file such copy, twenty-five cents for filing and preserving the same, which it is hereby made the duty of such clerk to do." Section 11 provides that no person other than the members of the medical society, shall, after the 1st day of July, 1824, be permitted to practice medicine and surgery in the state of Ohio, under a penalty of ten dollars for every violation. The 12th section provides that the society shall never fix the amount of compensation to be charged for professional services or for medicine. The 13th section requires the medical societies to hold a meeting for the election of a delegate to represent the society in a general convention. The 14th section requires that the delegates elected as provided in the preceding section, shall convene at Columbus on the second Monday in December, 1827, to organize themselves, and to determine the expediency of establishing a general medical society of the state, &c. Section 15 provides that the act shall not be construed so as to affect those who have been practising in the state previous to January 15th, 1821. Section 16 provides that the general medical society, when formed and organized, shall be a body politic and corporate. Section 17 repeals a law regulating the practice of physic, passed in January, 1821.

At a General Representative Convention, held in the town of Columbus, in the month of December, A. D. 1827, agreeably to an act of the General Assembly of Ohio, entitled, "An act to incorporate Medical Societies, for the purpose of regulating the practice of physic and surgery in this state," it was deemed expedient to establish a General Medical Society of the state of Ohio, in order to produce uniformity and efficacy in the proceedings of the District Medical Societies, and for the promotion of medical science, the following Constitution was adopted for the government thereof.

ARTICLE I. *Sec.* 1. The General Medical Society shall be composed of representative and honorary members.

Sec. 2. The representative members shall consist of one representative from each of the District Medical Societies who shall be chosen on the last Tuesday of May; and on their being convened in consequence of the first election, they shall be divided by lot, as equally as may be, into two classes; the seats of the delegates of the first class shall be vacated at the expiration of two years; and those of the second class at the expiration of four years, so that one half thereof, as nearly as possible, may be chosen biennially forever thereafter. And all vacancies which may occur in the representative members, shall be supplied by the District Medical Societies.

Sec. 3. The honorary members shall be chosen by the General Medical Society, from time to time, as they shall think proper, and shall be entitled to all the privileges of representative members, that of voting and receiving compensation for their services, excepted.

ARTICLE II. The Society shall meet biennially, in the town of Columbus, on the first Monday in January; and a majority of representative members shall constitute a quorum for the transaction of business. The first meeting shall be the first Monday in January, one thousand eight hundred and twenty-nine.

ARTICLE III. *Sec.* 1. At the opening of each stated meeting, the Society shall proceed to elect from among the representative members, a President, Vice-President, Recording Secretary, Corresponding Secretary, and Treasurer, who shall hold their offices for two years, and until their successors are chosen.

All elections shall be by ballot; and each representative member shall be entitled to one vote.

Sec 2. The business of the meeting shall be concluded by a discourse or dissertation on some medical subject, to be delivered by a person appointed at the stated meeting preceding.

Article IV. The President shall have power to call special meetings of the Society, whenever its officers, or a majority of them shall deem it necessary; in which case, public notice shall be given in some newspaper as specified for the stated meetings; and also special notice shall be served, through the medium of the post office, on all representative members of the Society, at least six weeks before the time of meeting. He shall have power to fill all vacancies in office, that may occur during the recess of the Society; he shall appoint committees, regulate debates, put questions, enforce an observance of the laws and regulations, have a casting vote on all questions before the Society, and perform such other duties as may be assigned him.

Article V. The Vice-President, in case of the death, resignation, disability, or absence of the President, shall hold and exercise all the powers set forth in the preceding article, until a new choice of President.

Article VI. The Recording Secretary shall have charge of the laws, records, and seal of the Society; shall notify the chairman of committees, furnish necessary papers, and the names of the committees. He shall give six weeks previous notice of the stated meetings of the Society, in some public paper printed in Columbus, and perform any other services required of him by the Society.

Article VII. The Corresponding Secretary shall have the charge of the letters and communications transmitted to this Society; shall cause all papers written in a foreign language to be translated into English; shall, under the direction of the President, answer all communications made to the Society; shall notify the District Societies of all resolutions governing them, passed by the Society; notify all honorary members of their election; and shall perform all such duties as may be assigned to him by the Society.

Article VIII. The Treasurer, before entering upon the duties of his office, shall give bond with sufficient security, conditioned for the faithful performance of his official duties, in such sum as the Society shall direct; which bond shall be approved by the Society, and deposited with the Recording Secretary. He shall account to the Society for all moneys, and on the first day of each stated meeting, shall exhibit an accurate statement of his accounts to the Society. He shall pay out no moneys without the order of the presiding officer, and consent of the Society.

Article IX. Any officer of the Society may resign his office, or be removed therefrom, for neglect or mal-conduct in office.

Article X. The Society shall, from time to time, determine the amount of revenue to be raised, which shall be derived from uniform taxation upon all licences granted by the District Societies; and, if necessary, upon the individual members thereof. It shall also determine the amount of compensation of its own members, which shall be paid out of the treasury of the Society.

Article XI. This Constitution may be revised, altered, or amended, by a vote of two-thirds of the representative members present, at any stated meeting of the Society.

A code of by-laws has also been adopted by the society, and also uniform rules and regulations for the government of the district medical societies, and a code of medical ethics. Want of space will not permit us to insert these at present.

Select Medico-Chirurgical Transactions.—Messrs. Carey & Hart will shortly publish under this title, a volume of memoirs, consisting of the most interesting communications read to the Medico-Chirurgical Societies of London and Edinburgh, the Association of Fellows and Licentiates of the King and Queen's Co-

of Physicians in Ireland, the Medical and Physical Society of Calcutta, the Royal Academy of Medicine, the Medical and Anatomical Societies of Paris, and of the medical papers communicated to the Royal Societies of London and Edinburgh, the Royal Academy of Sciences of Turin, &c. &c. &c. A volume will be published occasionally as materials shall offer; every volume however will be complete in itself. In the selection of the articles, reference will be particularly had to their practical importance and permanent value; and in all cases they will be given entire, without any abridgment.

The utility of such a work must be evident. Every one acquainted with the medical literature of the day, is aware that the memoirs read to the various medical societies constitute one of its most valuable and important portions.

It is well known that in Europe, especially in England, the most common expedients resorted to by young men to obtain practice, is to publish a book on the treatment of some disease, or on the use of some remedy, with cases, (not a few of which, there is reason to believe, are sometimes manufactured for the occasion,) illustrating the author's successful treatment of some disease, or of his new and advantageous employment of a certain medicine. With the slightest ingenuity, and by the aid of large type and wide spaces between the lines, a goodly sized volume is readily got up, is advertised in every book, magazine and newspaper, and even should the work remain unsold on the booksellers shelves, it has been found that though the author has paid much for his advertisement, the practice he obtains by it fully compensates him. We must not be understood as saying that this is the history of all the works published at the present day, but it is that of a great number of them, as we have found to our cost; for after wading through volumes we have with difficulty been able to glean enough to fill a page in our Bibliographical Notices.

The memoirs read to the Societies and Academies are of a very different order. They are mostly the production of experienced men, who despise or have no occasion to resort to the expedient just alluded to, or who have not time or disposition to write a volume. The value of these memoirs is further secured by the circumstance, that their character involves that of the societies in whose transactions they appear; these institutions are therefore careful never to sanction by publication any which are not calculated to reflect credit upon themselves. As no object is to be gained by unnecessarily extending such papers, they are usually perspicuous, and there is often great difficulty in giving a short analysis of them, and sometimes it is even impossible. Thus it cannot fail to strike any one who will look over the various European Journals, that while a work of several hundred pages is dismissed in an analysis of a page or two, many times that space is devoted to an analysis of one of these short memoirs. This work will constitute an excellent companion to this and other Journals, as it will contain such papers only, as we find it impossible to give a complete analysis of, or which it is of importance should be read in the author's own words.

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A Cyclopædia of Practical Medicine, comprising treatises on the nature and treatment of diseases, materia medica and therapeutics, medical jurisprudence, &c. edited by JOHN FORBES, M. D. F. R. S., ALEXANDER TWEEDIE, M. D., and JOHN CONOLLY, M. D., assisted by many of the most distinguished physicians in Great Britain, is preparing for publication in England. An American edition of this work will be published by Messrs. CAREY & LEA, who have engaged the assistance of many of the most eminent physicians to revise and adapt it to this country. It will make about five volumes 8vo. similar to the Encyclopædia Americana, and will be published at intervals of three months. A detailed prospectus will be shortly published.

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Oration delivered before the Philadelphia Medical Society, Feb. 19, 1831.—The annual oration before the Philadelphia Medical Society was pronounced this year by THOMAS HARRIS, M. D. and has been published by the Society. The influence of exercise in promoting health, the subject selected by the orator,

is one of extreme interest, and the observations of Dr. H. in relation thereto, are characteristic of the good taste, sound sense, and practical mind of the author. This essay may be read by every one with advantage, and we hope it will be extensively circulated.

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A Charge addressed to the Graduates in Medicine of the University of Pennsylvania, at the public commencement held in the College Hall, on Thursday, March 24, 1831 By Wm. H. De Lancey, D. D. Provost of the University.—The graduates have done well in publishing this eloquent address, and they cannot too deeply engrave on their minds the excellent precepts it contains.

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Coloured drawing of the great Sympathetic Nerve. By J. P. Manec, D. M. P. *Lecturer on Anatomy and Operative Surgery at Paris. Copied on stone by* P. Ancora. *Teacher of Drawing and Painting, Philadelphia. Letter press translated and corrected by* J. Pancoast, M. D.—Every physician should possess a copy of this splendid plate. It is impossible to understand the functions and deranged conditions of some of the most important organs without an acquaintance with the anatomy of the sympathetic, while the difficulty of making out the ramifications of that nerve on the dead body, is so great, that none, except the most experienced anatomists are able to accomplish it. In this plate the whole are delineated, and Mr. Ancora has conferred a benefit upon the profession by its publication. With this plate before them, our readers may reperuse the analysis of Lobstein's work on the great sympathetic nerve in our fifth volume with great advantage.

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Broussais's History of Chronic Inflammation.—A translation of this work which has been pronounced to be "a model of knowledge and originality in medicine," is in the press and will be published in a few weeks by Messrs. Carey & Lea.

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Thompson's Lectures on Inflammation.—This valuable work has been for some time entirely out of print both in Great Britain and this country. The enquiries that have constantly been made for it, have induced Messrs. Carey & Lea to republish it.

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Colles's Surgical Anatomy.—Messrs. Carey & Lea have published a second edition of this excellent work, with notes by J. P. Hopkinson, M. D. Demonstrator of Anatomy in the University of Pennsylvania.

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Manual of Pathology. By L. Martinet.—Messrs. Carey & Lea have published a second edition of the translation of the valuable Manual of Pathology by Dr. Martinet.

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New Books in the Press.—Messrs. Carey & Lea have in the press Dr. James Johnson's new work on "*Change of Air, or the Pursuit of Health; an Autumnal Excursion through France, Switzerland, and Italy,*" &c., *Tweedie on Fever,* and *Farrady on Chemical Manipulation.* The last will be enriched with notes by J. K. Mitchell, M. D. Lecturer on Chemistry in the Medical Institute.

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University of Pennsylvania.—The number of students in this institution on the 1st of January last, was 774, of whom 410 were attending the medical lectures.

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Medical College of South Carolina.—The number of students in this institution during the past winter was 131.

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Medical College of Ohio.—The number of medical students during the last session was 140.

New Analysis of Swaim's Panacea.—Just as this form was preparing for press we received from Dr. J. Rose of this city, an account of an analysis made by him, under the superintendence, and in the laboratory, of Professor Hare, of the contents of a bottle purporting to be "Swaim's Panacea." In this analysis both mercury and arsenic are said to have been detected. We have already published the statements of three different chemists, by whom mercury was found in Swaim's Panacea,* but it had not been before examined, we believe, for arsenic, at any rate, so far as we know, this is the first time that the presence of that poison has been detected in it by chemical analysis. We have long been satisfied, however, of the variable composition of the panacea, and it seems probable that it sometimes contains both the corrosive sublimate and arsenic; sometimes only one of them, and at others neither. So perfect have become the processes of modern analytic chemistry, that it is almost impossible for the minutest particle of a mineral substance to elude the scrutiny of the skilful analyst, and it is in vain now for the empiric to think to conceal his poisonous drugs by mixing them with syrups and saccharine matters.

The communication of Dr. Rose is accompanied with several affidavits made for the purpose of showing that the matter analyzed was the remains of a bottle obtained from Swaim, by a man named James Hill, for the cure of an ulcer on his leg; that the said James Hill, on the third day after commencing to use the medicine, four wine-glasses full only having been taken, died with vomiting of blood; that the deceased, after taking the medicine, complained that it burned him to the heart; and that the remainder of the contents of the bottle were carefully preserved by his friends until given for analysis.

We regret that the late period at which the communication of Dr. Rose and the accompanying documents were received, prevents our publishing them in the present number.

NECROLOGY.

It is with regret that we have to announce the death of BENJAMIN ELLIS, M. D. Professor of Materia Medica and Pharmacy in the Philadelphia College of Pharmacy, and editor of the Journal of that institution.

We have also to record the death of the distinguished Professor of Chemistry in the University of Maryland, ELISHA DE BUTTS, M. D. one of the collaborators of this Journal.

The College of Physicians and Surgeons of New York have lately been deprived by death of their president, Dr. WATTS.

We hope that the friends of these distinguished physicians will furnish us with short biographical notices of them.

* See Vol. IV. p. 530, and Vol. V p. 262 and p. 542, of this Journal.

QUARTERLY
MEDICAL ADVERTISER.

IN consequence of the extended circulation of the AMERICAN JOURNAL OF THE MEDICAL SCIENCES, the Proprietors intend, in compliance with the wishes of many of their Friends, to increase the facilities for advertising, hitherto possessed by it. For this purpose, a Sheet of Advertisements will be affixed to the succeeding Numbers of the Journal. All Booksellers, Medical Gentlemen, and others desirous of taking advantage of this mode of announcement, will please address their Advertisements to CAREY & LEA, Philadelphia, by the 10th day of the month preceding that of the publication of the Journal, viz. on 10th July, 10th October, 10th January, and 10th April.

TERMS.

For one page - - - - - - - - -	Six dollars.
Half a page or less - - - - - -	Three dollars.

Philadelphia, January 20, 1830.

UNIVERSITY OF PENNSYLVANIA.

At a Medical Commencement held March 24th, 1831, *the Degree of Doctor of Medicine was conferred upon the following Gentlemen.*

NORTH CAROLINA.	SUBJECT OF THESIS.
George Blacknall,	*Local Blood-letting.*
Lawson F. Henderson,	*Indolent Ulcers.*
Robert H. Dalton,	*Pathology of Fever.*
Thomas D. Parke,	*Scrofula.*
Algernon S. Perry,	*Acute Gastritis.*
G. W. Caldwell,	*Tartar Emetic.*
James K. Nisbet,	*Cynanche Trachealis.*
William L. Hogan,	*Modus Operandi of Cold.*
John Allison,	*Peripneumonia.*
Calvin C. Covington,	*Jaundice.*
Joseph H. Cheairs,	*Acute Peritonitis.*
VIRGINIA.	
John M. Galt,	*Acupuncturation.*
Harvey Feamster,	*Hernia.*
Anderson Wade,	*Duodenitis.*
James R. Conrad,	*Peripneumonia.*
William B. Forsyth,	*Injuries of the Joints.*
Euclid Borland,	*Acute Rheumatism.*
William B. Cochran,	*Capillary System.*
William D. Scott,	*Chlorosis.*
Alfred W. Shields,	*Tetanus.*
Daniel S. Morgan,	*Fever.*
Adolphus C. Smith,	*Dysentery.*
John G. Carter,	*Pneumonia Biliosa.*
Robert S. Payne,	*Dropsy.*
Miles George,	*Apoplexy.*
Randolph Kownslar,	*Copulation and Fecundation*

William D. M'Guire,	*Bilious Remittent Fever.*
Richard Blow, Jr.	*Modus Operandi of Cold.*
John N. Broocks,	*Peritonitis Acuta.*
Samuel A. Pattison,	*Proximate Cause of Inflammation.*
Nathaniel G. Friend,	*Jaundice.*
William A. Davison,	*Eupatorium Perfoliatum.*
Morris Emanuel,	*Erysipelas.*
Benjamin F. Taliaferro,	*Hæmoptysis.*
Richard C. Tunstall,	*Bilious Fever.*
Thomas P. Nash,	*Scrofula.*
Thomas Cooper,	*Pathological Observations illustrated by Cases*
Thomas S. King,	*Fracture of the Patella.*
Thomas J. Vaiden,	*Endemics, Epidemics, and Contagious Diseases*
Carter Berkeley,	*Luxation of the Scapulo Humeral Articulation*
Lucius C. Leland,	*Pertussis.*
John W. Wooldridge,	*Acute Hepatitis.*
Henry S. Rennolds,	*Fracture of the Clavicle*
Lemuel S. E. Moss,	*Hepatic Inflammation.*
Samuel Scott,	*Phenomena of Death.*
Richard H. Stuart,	*Digestion.*
Robert H. Wharton,	*Hepatitis.*
Benjamin R. Wilkinson,	*Pertussis.*
William B. Price,	*Intermittent Fever*
William Steed,	*Helminthology.*
Benjamin F. Wilson,	*Typhoid Fever.*
Daniel Trigg,	*Hydrocephalus Acutus*
Meriwether L. Anderson,	*Fever.*
Thomas J. A. Cooke,	*Revulsives.*
William Yates,	*Chorea Sancti Viti*
Charles E. Orrick,	*Cholera Infantum*
William French, Jr.	*Dysentery.*
Vincent Bramham, Jr.	*Bilious Inflammatory Fever*
Lucian B. Price,	*Hydrops Abdominis.*
William F. M'Clenahan,	*Phlebitis.*
William A Brockenbrough,	*Diseases on tide water of Va*
Philip L. Lightfoot,	*Acute Peritonitis.*
Thomas D. Mutter,	*Chronic Inflammation of Testis*
John G. Dillon,	*Puerperal Fever.*
Aurelius Sallé,	*Prolapsus Uteri.*
Charles E. Miller,	*Splenitis.*
Francis T. Stribling,	*Peritonitis Acuta.*
Andrew M. Glassell,	*Acute Dysentery.*
John J. Thompson,	*Cholera Infantum.*
Benjamin J. Walker,	*Acute Dysentery.*
Lewis W. Minor,	*Phlebitis.*
John S. Nicholas,	*Physiology of the Nervous System.*
PENNSYLVANIA.	
William A. Ludwig,	*Measles.*
Joel Fithian,	*Hydrocele.*
Joseph P. Musgrave, Jr.	*Gastritis Acuta.*
Joseph W. Paul,	*Opium.*
Charles P. Fairlamb,	*Trachitis.*
Isaac Parry,	*Dyspepsia.*
Moses W. Marshall,	*Apoplexy.*
Thomas T. Smiley,	*Digitalis in Dropsy*
Coburn Whitehead,	*Hæmoptysis.*
Napoleon Constantine Barrabino	*Injurious Effects of Tight Lacing, on female, &c.*

William Corson, . . . *Erysipelas.*
Theodore Dewees, ... *Enteritis.*
Lewis B Bringhurst, ... *Erysipelas.*
Thomas M. Smith, ... *Inflammation as Modified by Heat and Cold.*
Charles H. Humphrey, ... *Changes from Utero-gestation.*
George Maulsby, ... *Mania a Potu.*
Peter I Nagle, ... *Phthisis Pulmonalis.*
Henry De Witt Pauling, . . *Simplocarpus Fœtida.*
Joseph Hutchins, Jr. . . . . *Cholera Infantum.*
Thomas Read Potts, ... *Hepatitis.*
Humphrey M. Harlan, ... *Prolapsus Uteri.*
Joel Darrah, ... *Mania a Potu.*
John W M'Kinney, ... *Variola Vaccina.*
Arthur D. Cernea, ... *Dyspepsia.*
Newton May, ... *Idiopathic Hæmorrhage.*
William Gregg, ... *Autumnal Bilious Fever*
Tilghman H. Martin, ... *Pneumonitis*
Benjamin Malone, ... *Endermic Applications*
Horace Evans, ... *De Cancri Natura*
George Hamilton, ... *Intermittent Fever.*
Caleb Ash, ... *Stricture of the Œsophagus.*
Abraham L. Huebener. . . . *Injuries of the Head*
John Young Wallace. . . *Gangrenous Ulcers.*
Alfred Langdon Elwyn, . . . *Melancholia.*

ALABAMA.

Samuel Booth Malone, (U. S. N.) *Inguinal Ganglionitis peculiar to West Coast of South America.*
William H. Coleman, ... *Leucorrhœa.*
Alden P. Ford, ... *Apocynum Cannabinum.*

SOUTH CAROLINA.

Thomas G. Graham, ... *Sternalgia.*
William Reynolds, ... *Cholera Morbus.*
John Lake, ... *On the Brain.*
Isaac William Stokes, ... *Remote Cause of Bilious Fever.*
James A Young, ... *Peritonitis.*
Isaac Lyons, Jr . . . . . *Strictures of the Rectum.*
Joseph T. Capers, ... *Lithotomy.*

NEW JERSEY.

Alfred A. Woodhull, ... *Fever.*
William Daniels, ... *Dysentery.*
Benjamin P. Howell. . . . . *Intermittent and Remittent Fever.*
J. Van Dyke Joline, ... *Apoplexy.*
George Bayles, ... *Neuralgia.*
William S. Longstreet, ... *Puerperal Fever.*

GEORGIA.

John W. Malone, ... *Acute Inflammation.*
Abraham S. Hill, ... *The Pulse.*
Willis B. Harvey, ... *Dyspepsia.*
Richard D. Moore, ... *Natural Labour.*
Thomas L. De Graffenreid, . . *Hæmorrhoids.*
Jeremiah Beall, ... *Dysmenorrhœa.*
Ferdinand A. Burdell, ... *Morbid Effects of Cold Water.*
Timothy G. Barnard, ... *Milk Leg.*
Purwell Ingram, ... *Acute Hepatitis.*

FRANCE.

Edward Naret, ... *Mania a Potu.*

LOUISIANA.

William T. Crain, ... *Dropsy.*

KENTUCKY.	
Reuben Willis, ...	*Fever.*
DELAWARE.	
John Prince, ...	*Cynanche Trachealis*
TENNESSEE.	
John N. Esselman, ...	*Fever.*
DISTRICT OF COLUMBIA.	
Horatio N. Lloyd, ...	*Bronchitis Acuta*
MISSISSIPPI.	
Charles Turnbull, ...	*Scrofula.*
Volney Metcalfe, ...	*Gastritis.*
NEW YORK.	
Edward W. Ford, . . .	*Sympathetic Irritations.*
MARYLAND.	
Richard Wootton, . . .	*Tonsillitis.*
Thomas A. Fleming, . . .	*Acute Peritonitis.*
Solomon M. Jenkins, ...	*Diet.*
Simon A. Wickes, ...	*Hæmoptysis.*
Charles A. Hathwell, .	*Phlegmasia Dolens*
NOVA SCOTIA.	
James R. Fitch, ...	*Trachitis.*
FLORIDA.	
James H. Randolph, . .	*Hæmoptysis.*
MASSACHUSETTS.	
Alonzo Chapin, ...	*Non-contagiousness of Typhus*

At the Commencement of July, 1830, *the Degree of Doctor of Medicine conferred upon—*

Samuel Roan,	Va. . .	*Bilious Fever.*
William Dunn,	N. C. . .	*Mania a Potu.*

TOTAL, 150. W. E. HORNER, *Dean*

TRANSYLVANIA UNIVERSITY.

MEDICAL GRADUATES, 1831.

At a public commencement held in the Medical Hall of Transylvania University on Thursday the 10th of March, 1831, the degree of Doctor of Medicine was conferred on the following gentlemen, who submitted Dissertations on the subjects annexed to their names, viz.

Charles W. H. Alexander, of North Carolina, Thesis de Ingenita tractatione antecedente et subsequente Chirurgiæ; et ejus momento.
Shadrach Bell, of Tennessee, on Curved Spine.
Barry W. Benson, of Mississippi, on the Diseases of Dentition.
Anderson M. Berry, of Kentucky, on Typhus Fever.
Thomas C. Black, of Tennessee, on Rheumatism.
Boling A. Blakey, of Alabama, on Mercury, and the Treatment of Mercurial Salivation.
Burwell R. Bobo, of South Carolina, on Phrenology as applied to Pathology and Surgery.
Hugh S. Bodley, of Kentucky, on Paronychia.
James A. Bullock, of South Carolina, on Dyspepsia.
Swan P. Burnett, of North Carolina, on Typhus Fever.

[illegible], of Georgia, on Fractures of the Cervix of the Os Femoris.
[illegible], of Virginia, on Dysentery.
[illegible], of Tennessee, on the Sanative influence of Biliary evacuation in the Treatment of Chronic Diseases.
[illegible], of Virginia, on Digestion.
[illegible], of South Carolina, on Digestion.
[illegible], of Alabama, on Puerperal Fever.
[illegible], of Virginia, on Emetics.
[illegible] *Geiger*, of South Carolina, on Congestive Fever.
[illegible], of South Carolina, on the Bilious Intermittent Fever of the [illegible]
[illegible] *Trigg*, of Virginia, on the Non-contagious nature of Rubeola.
[illegible] *Hamilton*, of Kentucky, on Caries of the Teeth.
[illegible], of Alabama, on Epidemic Fever.
[illegible], of Virginia, De Diagnose Erysipelatis ab Phlegmone et [illegible]
[illegible], of Virginia, on Puerperal Fever.
[illegible], of Alabama, on the Endemic Fever of Madison County, Alabama.
[illegible], of South Carolina, on Digestion.
[illegible], of Georgia, on the Autumnal Bilious Fever of southern Climates, with its Pathology and Therapeutics.
[illegible], of Tennessee, on Inguinal Hernia.
[illegible] *McClelland*, of North Carolina, on Cholera Infantum.
[illegible] *McGoodwin*, of Kentucky, on the use of Emetics in Indigestion.
[illegible], of Alabama, on Bronchocele.
[illegible], of Kentucky, on Dysentery.
[illegible], of Tennessee, on a Remittent Fever which prevailed in Smith County, Tennessee, in the autumn of 1830.
[illegible], of Georgia, on Syphilis.
[illegible], of Alabama, on Opacity of the Cornea.
[illegible], of Ireland, on Hydrophobia.
[illegible], of Tennessee, on the Physiology of the large Intestines.
[illegible] *Rochester*, of Kentucky, on Acute Dysentery.
[illegible], of Virginia, on Hydrocephalus.
[illegible], of Tennessee, on Amenorrhœa.
[illegible] *Scott*, of Alabama, on Dysentery.
Thomas Smith, of Kentucky, on the Application of the Bandage in the Treatment of Fractures.
[illegible] *Smith*, of Mississippi, on the Physiology of the Brain.
Samuel Snoddy, of South Carolina, on Digestion.
[illegible] *Spurr*, of Kentucky, on the Non-contagion of Yellow Fever.
[illegible] *Thomas*, of Tennessee, on Morbus Coxarius.
[illegible] *Wallace*, of North Carolina, on Congestive Bilious Fever.
[illegible] *Webb*, of Tennessee, on Diabetes.
[illegible] *Williams*, of South Carolina, on the Sympathies of the Stomach.
[illegible] *Williams*, of Tennessee, on Erysipelas.
[illegible] *Woodson*, of Kentucky, on Cachexia Africana.
[illegible] *Young*, of Kentucky, on Prolapsus Uteri.

The *Honorary degree* of Doctor of Medicine was conferred upon *James* [illegible], of [illegible], Tennessee, and *Pinckney C. Caldwell*, of Charlotte, North Carolina.

C. W. SHORT, M. D. *Dean*.

THE

AMERICAN JOURNAL

OF THE

MEDICAL SCIENCES.

COLLABORATORS.

Jacob Bigelow, M. D. *Professor of Materia Medica in Harvard University, Boston.*

Edward H. Barton, M. D. *of St. Francisville, Louisiana.*

Walter Channing, M. D. *Professor of Midwifery and Legal Medicine in Harvard University, Boston.*

N. Chapman, M. D. *Professor of the Institutes and Practice of Physic and Clinical Practice in the University of Pennsylvania.*

John Redman Coxe, M. D. *Professor of Materia Medica and Pharmacy in the University of Pennsylvania.*

William C. Daniell, M. D. *of Savannah, Georgia.*

William P. Dewees, M. D. *Adjunct Professor of Midwifery in the University of Pennsylvania.*

S. Henry Dickson, M. D. *Professor of the Institutes and Practice of Medicine in the Medical College of S. Carolina.*

C. Drake, M. D. *of New York.*

Benjamin W. Dudley, M. D. *Professor of Anatomy and Surgery in Transylvania University.*

Gouverneur Emerson, M. D. *of Philadelphia.*

Thomas Fearn, M. D. *of Alabama.*

John W. Francis, M. D. *Professor of Obstetrics and Forensic Medicine in Rutgers Medical College, N. York.*

E. Geddings, M. D. *Lecturer on Anatomy and Surgery, Charleston, South Carolina.*

William Gibson, M. D. *Professor of Surgery in the University of Pennsylvania.*

R. E. Griffith, M. D. *Lecturer on Materia Medica and Pharmacy in the Philadelphia School of Medicine.*

E. Hale, M. D. *of Boston.*

Robert Hare, M. D. *Professor of Chemistry in the University of Pennsylvania.*

Isaac Hays, M. D. *one of the Surgeons of the Pennsylvania Infirmary for diseases of the Eye and Ear.*

George Hayward, M. D. *of Boston.*

Thomas Henderson, M. D. *Professor of the Theory and Practice of Medicine in the Columbian College, District of Columbia.*

William E. Horner, M. D. *Adjunct Professor of Anatomy in the University of Pennsylvania.*

David Hosack, M. D. *Professor of the Institutes and Practice of Medicine in Rutgers Medical College, New York.*

Ansel W. Ives, M. D. *of New York.*

Samuel Jackson, M. D. *Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.*

Samuel Jackson, M. D. *of Northumberland, Pennsylvania.*

C. B. Matthews, M. D. *of Philadelphia.*

Valentine Mott, M. D. *Professor of Pathological and Operative Surgery in the College of Physicians and Surgeons, New York.*

James Moultrie, Jr. M. D. *of Charleston, S. C.*

Reuben D. Mussey, M. D. *Professor of Anatomy and Surgery in Dartmouth College, New Hampshire.*

James M. Pendleton, M. D. *Lecturer on Midwifery and Diseases of Women and Children, New York.*

Philip Syng Physick, M. D. *Professor of Anatomy in the University of Pennsylvania.*

Nathaniel Potter, M. D. *Professor of the Theory and Practice of Medicine in the University of Maryland.*

D. L. Rogers, M. D. *of New York.*

Thomas Sewall, M. D. *Professor of Anatomy and Physiology in the Columbian College, District of Columbia.*

A. F. Vache, M. D. *of New York.*

John Ware, M. D. *of Boston.*

John C. Warren, M. D. *Professor of Anatomy and Surgery in Harvard University, Boston.*

J. Webster, M. D. *Lecturer on Anatomy and Surgery, Philadelphia.*

N. W. Worthington, M. D. *Professor of Materia Medica in the Columbian College, District of Columbia.*

Thomas H. Wright, M. D. *Physician to the Baltimore Alms-House Infirmary.*

TO READERS AND CORRESPONDENTS.

We have received the following works.—

Cours de Pharmacologie ou traité elementaire d'histoire naturelle médicale et Pharmacie et de Therapeutique suivi de l'art de formuler. Par F. Foy, M. P. Professeur particulier de Pharmacologie, &c. &c. 2 vols. 8vo. G. Bailliere, Paris, 1831. (From the Author.)

Transactions of the Medical and Physical Society of Calcutta, Vols. III. and IV. (From the Society.)

De la distribution par mois des Conceptions et des Naissances de l'Homme, considérée dans ses rapports avec les saisons, avec les climats, avec le retour périodique annuel des époques de travail, et de repos, d'abondance et de rareté des vivres, et avec quelques institutions et coutumes sociales. Par L. R. Villermé. (From the Author.)

Clinical Illustrations of Fever comprising a report of Cases treated at the London Fever Hospital, 1828–9. By Alexander Tweedie, M. D. Member of the Royal College of Physicians, London, Physician to the Fever Hospital, London. Philadelphia, Carey & Lea, 1831. (From the Publishers.)

Anatomical Demonstrations; or Collossal Illustrations of Human Anatomy. By Professor Seerig. Translated from the German. Part I. London, A. Schloss, (From the Publisher.)

Anatomical Atlas on an entirely new plan. By M. J. Weber. Professor of the Royal Prussian University, Frederic William, at Bonn. Sect. 1. London, A. Schloss. (From the Publisher.)

Explanation of the Anatomical Atlas of Dr. M. J. Weber. (From the Publisher.)

An Analysis of the Mineral Waters of Saratoga and Ballston, with Practical Remarks on their Medicinal Properties; together with a history of the discovery and settlement of these celebrated Watering Places, and observations on the Geology and Mineralogy of the surrounding country. By John H. Steel, M. D. Saratoga Springs, 1831. (From the Author.)

The Pharmacopœia of the United States. By authority of the National Medical Convention, held at Washington, A. D. 1830. (From the Committee of Publication.)

Laws for regulating Medical Societies, together with the By-laws and Medical Ethics for the Medical Society of the County of Rensselaer, incorporated in 1806. With a list of the members. Published by order of the Society. Troy, 1831. (From the Society.)

Disputatio Medica Inauguralis de Cynanche Tracheali; auctore Samuel Malins. Edinburgh, 1830. (From the Author.)

Directions for making Anatomical Preparations, formed on the basis of Pole, Marjolin, and Breschet, and including the new method of Mr. Swan. By USHER PARSONS, Professor of Anatomy and Surgery. Philadelphia, Carey and Lea, 1830. (From the Publishers.)

An Exposition of the Principles of the New Medical Doctrine, with analysis of Theses sustained on its different parts. Translated from the French of J. M. A. GOUPIL, D. M. P. &c. &c. By JOSIAH C. NOTT, M. D. To which is appended a short essay on leeches, by the Translator. Columbia, S. Carolina, 1831. (From the Translator.)

A Treatise on Indigestion; with Observations on some Painful Complaints originating in Indigestion, as Tic Douloureux, Nervous Disorder, &c. By THOMAS J. GRAHAM, of the University of Glasgow, and the Royal College of Surgeons, London, &c. First American from the last London edition; revised and enlarged, with notes; and an Appendix, containing observations relative to the mode of treating Dyspepsia, lately adopted and recommended by Dr. Avery, Mr Halsted, and others. By an American Physician. Philadelphia, Key & Meilke (From the Editor.)

Importance of Physical Education. A Lecture delivered before the Convention of Teachers and other friends of Education, assembled to form the American Institute of Instruction, August 20th, 1830. By JOHN C. WARREN, M. D Professor of Anatomy and Surgery, in the Medical School of Harvard University. Published at the request of the Board of Censors. (From the Author.)

The Catechism of Health; or plain and simple rules for the Preservation of the Health and Vigour of the Constitution from Infancy to Old Age. (From the Publisher.)

Observations on the Prevention and Cure of Hydrophobia, according to the latest popular publications in Germany. Read before the New York Medical and Philosophical Society. By JOSEPH LEO-WOLF, M. D. New York, 1831 (From the Author.)

An Introductory Lecture on Midwifery, comprising a Critical, Historical, and Ethical Disquisition on that branch of Science, delivered February 7th, 1831, at the School of Medicine in Liverpool. By SAMUEL MALINS, M. D. Lecturer on Midwifery, &c. Liverpool, 1831, T. Kaye. (From the Publisher.)

Transactions Médicales; Journal de Médecine Pratique et de literature Médicale, February, March, 1831. (In exchange.)

Annales de la Médecine Physiologique, August, 1829, December, 1830, January, 1831. (In exchange.)

Archives Générales de Medecine, February, March, 1831. (In exchange.)

Revue Médicale, January, February, March, 1831. (In exchange.)

Bulletin des Sciences Medicales, October, November, 1831, (In exchange.)

Journal Universel et Hebdomadaire de Médecine et de Chirurgie Pratiques et des Institutions Médicales, March, 1831. (In exchange.)

Journal de Chimie Médicale, February, 1831. (In exchange.)

Gazette Médicale de Paris, February, March, April, 1831. (In exchange.)

Nouvelle Bibliotheque Médicale, June, 1829. (In exchange.)

London Medical and Physical Journal, February, March, April, May, 1831, (In exchange.)

London Medical Gazette, August, 1830, and January, February, and March, 1831. (In exchange.)

The Edinburgh Medical and Surgical Journal, April, 1831. (In exchange.)

The Medico-Chirurgical Review, April, 1831. (In exchange.)

London Medical and Surgical Journal, February, March, April, 1831. (In exchange.)

The Glasgow Medical Journal, November, 1830, February, 1831. (In exchange.)

The Midland Medical and Surgical Reporter, February, 1831. (In exchange.)

The Journal of the Royal Institution of Great Britain, February, 1831. (In exchange.)

North of England Medical and Surgical Journal, November, 1830, and February, 1831. (In exchange.)

Boston Medical and Surgical Journal, Vol. III. Nos. 19 to 22. (In exchange.)

Transylvania Journal of Medicine and the Associate Sciences, Vol. IV. No. 1. (In exchange.)

The Western Journal of the Medical and Physical Sciences, Vol. IV. No 4. (In exchange.)

The Maryland Medical Recorder, Vol. II. Nos. 1 and 2. (In exchange.)

The New York Medical Journal, May, 1831. (In exchange.)

The North American Medical and Surgical Journal, July, 1831. (In exchange.)

For the gratification of our contributors we continue the references to the works in which they will find notices of their communications; these references are, as usual, restricted to the Journals received during the preceding three months.

Professor Mott will find his case of Ligature of the Subclavian Artery copied in the London Medical Gazette, for April, 1831.

Professor Horner's case of Ozena is noticed in the London Medical Gazette, for February, 1831.

Professor Dickson's case of Amnesia is noticed in the Western Journal of the Medical and Physical Sciences, for April, 1831.

Professor Parsons' paper on the Comparative Influence of Vegetable and Animal Decomposition, as a Cause of Fever, will be found republished, with a few alterations, in the Maryland Medical Recorder, for July, 1831.

Professor Wright's paper on the Reünion of Fractures is noticed in Brous-

sais's Annales, for August, 1829—and his cases of Inflammation of the Brain in the Maryland Medical Recorder, July, 1831.

Dr. HARRIS'S case of Enlarged Tongue is copied in the Archives Générales, for February, 1831.

Dr. JACKSON'S paper on the Use of Rhubarb in Hæmorrhoids, is noticed in the Revue Médicale, for February, 1831, and in the Gazette Médicale for the same month.

Dr. GEDDINGS'S observations on Strychnine are noticed in the Transylvania Journal, No. XIII. and his remarks on the Use of Ol. Terebinth. as a cure for Salivation are copied in the London Medical and Surgical Journal, for April, 1831

Dr. MITCHELL'S New Practice in Rheumatism is noticed in the N. A. Medical and Surgical Journal, for July, 1831.

Dr. FAUST'S experiments on Endosmose are copied in the Archives Générales, for February, 1831.

Dr. FAHNESTOCK'S observations on the Use of Compound Tincture of Benzoin in Burns are noticed in the Archives Générales, for March.

Dr. CALLAGHAN'S account of the Epidemic Scarlatina of Western Pennsylvania, is copied in the Boston Medical and Surgical Journal, for May.

Dr. ROE'S case of Poisoning relieved by Emetics per Anum is copied in the Boston Medical and Surgical Journal, for June, and in the London Medical Gazette, for April.

Dr. CARTWRIGHT'S method of Draining the Thorax is noticed in the London Medical Gazette, for April.

Dr. SMART'S case of Traumatic Tetanus is noticed in the London Medical and Physical Journal, for February.

Dr. HORT'S case of Poisoning with Corrosive Sublimate relieved by Charcoal is noticed in the London Medical and Physical Journal, for February.

Mr. CARPENTER'S method of consolidating Copaiba is noticed in Froriep's Notizen, for October, 1829.

Authors of new medical books, desirous of having them reviewed or noticed in this Journal at the earliest opportunity, are invited to transmit to the Editor a copy as soon after publication as convenient, when they will receive prompt attention. Under ordinary circumstances, very considerable delay is caused by the circuitous routes through which they are received.

Papers intended for publication, should be sent, *free of expense*, as early after the appearance of the Journal as possible, in order to be in time for the ensuing number. Such communications should be addressed to "CAREY & LEA, Philadelphia, for the Editor of the American Journal of the Medical Sciences." All letters on the *business* of the Journal to be addressed exclusively to the publishers.

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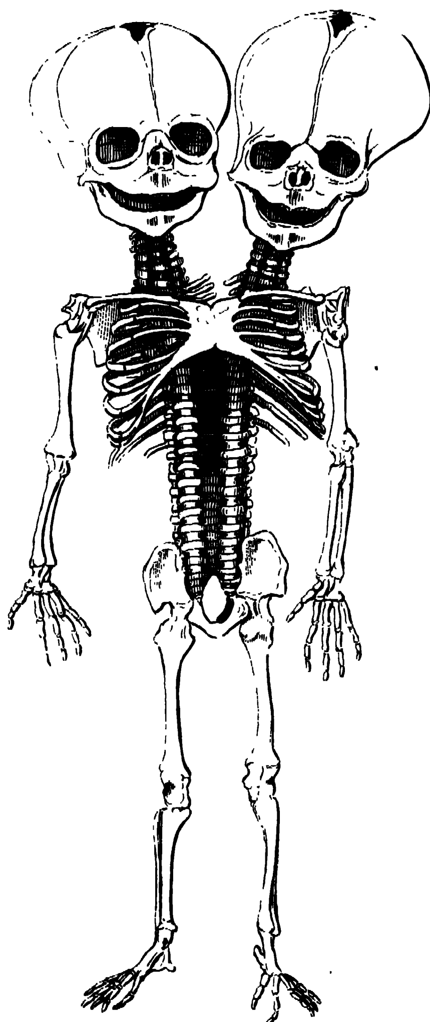
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THE

AMERICAN JOURNAL

OF THE

MEDICAL SCIENCES.

PRIZE ESSAY.

At the Annual Convention of the MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND, *held in Baltimore, June 6th,* 1831, *the following report was submitted by the Prize Essay Committee, and accepted by the Convention.*

JOHN FONERDEN, *Rec. Sec.*

The Committee appointed by the Medical and Chirurgical Faculty of Maryland, at the last convention to award the medical prize—

Report, That in the performance of their duty, they selected for the subject of the Prize Essay, "*The nature and sources of* MALARIA, *or noxious miasma, from which originate the family of diseases, usually known by the denomination of bilious diseases; together with the best means of preventing the formation of malaria, removing their sources, and obviating their effects on the human constitution, when the cause cannot be removed.*" As was expected, from the great importance of the question, many highly respectable essays were presented. Several of them deserve special commendation for ingenuity and research. Your committee, in the execution of their assigned duty, have adjudged the prize to that bearing the superscription—

"Dies errorem delet, veritatemque illustrat."

The committee, however, respectfully suggest that the other competitors for the prize be requested to give publicity to their productions. The subject of malaria is one of great concern to the world at large, and the results of concentrated investigation are too valuable to be lost, when so much information remains unsupplied. CHARLES CALDWELL, M. D. of Kentucky, is the author of the successful essay.

THOMAS E. BOND, M. D.
JOHN BUCKLER, M. D.
JOHN FONERDEN, M. D.
H. WILLIS BAXLEY, M. D.
EDMUND G. EDRINGTON, M. D.
JOHN L. YEATES, M. D.
PETER SNYDER, M. D.

Art. I. *An Essay on the Nature and Sources of the Malaria or Noxious Miasma, from which originate the Family of Diseases, usually known by the denomination of Bilious Diseases; together with the best means of Preventing the Formation of Malaria, removing the Sources, and obviating their Effects on the Human Constitution, when the Cause cannot be removed.* By Charles Caldwell, M. D. Professor of the Institutes of Medicine and Clinical Practice in Transylvania University. (Published at the request of the Medical and Chirurgical Faculty of Maryland.)

"Dies errorem delet, veritatemque illustrat."

THE entire subject of this dissertation, as proposed by the Faculty of Maryland, is included under the four following questions:—

1. What is the nature of the malaria that produces bilious fever?
2. From what source or sources does it arise?
3. What are the best means of preventing its formation and removing its sources? and when the sources cannot be removed, nor the formation prevented,
4. How may its effects on the human system be most certainly obviated?

These questions I shall now consider in the order in which they are here proposed, treating each of them as succinctly as the subject will admit.

1. *What is the nature of the malaria that produces bilious fever?*

To this question my answer is brief. *I do not know.* Nor is any one better informed about it than myself. The present state of science does not admit of better information. By no other test than its deleterious effects on the animal kingdom, more especially on man, can even the existence of the poison be established. Of its nature or composition, or the species of matter to which it belongs, no more is known than is of the poisons of small-pox, measles, or rabies canina. Here the matter, for the present, might be suffered to rest, were it not that multiplied errors respecting it are afloat, the exposure of some of which would seem, in its beneficial effects, to be second only to the discovery of truth.

The malaria of bilious fever is supposed, no doubt correctly, to be the product of chemical agency. The votaries of the laboratory, therefore, have endeavoured to make it the subject of chemical experiment. But in no instance have they succeeded. Virtually they have sought a phantom and found nothing. Their efforts have been as unavailing as those of the child that pursues its shadow or grasps

at a moon-beam. I speak from personal observation. I have often witnessed these attempted experiments, and sometimes engaged in them myself, with equal interest and disappointment. They were tried on the atmospheres of different places, where bilious diseases prevailed in every grade from a slight intermittent to malignant yellow fever. But they were tried to no purpose. In the air where man contracted disease soonest, more certainly, and of the worst character, no more poison of any kind was discoverable than in the healthiest atmosphere of the hill top or the mountain. Nor could any extraneous matter, in the form of gas or otherwise, be detected in the one body of air more than in the other. In each, all the common atmospherical components were present in their natural proportions; and nothing else appeared. Neither a deficiency of oxygen, therefore, nor a superabundance of carbonic acid gas, or of any other known chemical compound, could be indicated as the cause of the prevailing sickness. That evil was the product, as already mentioned, of a lurking agent, whose very existence could be recognised only by the injury it inflicted on animated nature.

But, as relates to the nature of bilious malaria, the influence of chemistry has not been merely negative. It has not only failed to confer any benefit on the medical profession; it has proved to it a source of positive mischief. This it has done by becoming a hot-bed of hypotheses, to the exclusion of observation and sober inquiry. During the late domination of ultra chemistry, when the entire system of man was considered a chemical laboratory, and almost every science was adulterated by the caloric of the crucible or the fumes of the retort, it was impossible that malaria should not be considered a product of the same source. And as some chemists affected a knowledge not only of all the elements, but also of all the combinations of matter, it was inevitable that they should attempt to identify the poison in question with one or other of the gases formed by their experiments. From this arose a state of things which seemed to proclaim that the only province of *chemical* physicians was to deal in *conjecture*. And their art was practised indiscriminately on the phenomena of living and dead matter. Hence, as respected malaria, the brain of every member of that school, brought forth its own peculiar fancy, until, collectively, the motley brood almost equalled in number, and quite in ludicrousness, the fables of Æsop. Every single gas, with every imaginable mixture of gases, was proclaimed, in its turn, or rather in a simultaneous and promiscuous uproar, (no candidate for the honour of discovery waiting for or listening to a competitor,) to be the miasm productive of bilious fever. But as far as I

remember, (for I was not so much edified or delighted by the tumult as to treasure up all that transpired in the course of it,) public attention was longest and most forcibly attracted by the claims of the nitrous oxide or some other nitrous compound, and carbonic acid gas. These found many advocates, some of them distinguished for ability and eloquence, who made it, for several years, their daily study and nightly toil, to prove them the source of bilious complaints. Yellow fever was, at the time, prevailing annually in our large commercial cities. An effort was made, characterized by much ingenuity, and urged with a degree of industry and perseverance worthy of a better cause, to derive that malady from nitrous oxide or some other gas whose base was nitrogen. The New York Medical Repository contains many papers in defence of this hypothesis, some of which were marked with much research, and an unusual share of strength and dexterity in argument. But they were written to no purpose. Nature has decided that fact must prevail, and that all else is perishable and evanescent. However attractive and imposing the form and colouring that talent and labour may bestow for a time on hypothesis and error, they cannot establish them on the ruins of truth. The nitrous oxide notion, therefore, had its day. But it was short. Records only say of it that it *was*. Present opinion says it is *no more*. Two well known facts ought to have been sufficient to stifle it in its birth. No mode of applying nitrous oxide or any other nitrous compound to the human body, can produce yellow fever. The experiment was repeatedly made during the period referred to, and uniformly failed. Nor could a particle of the gas in question be detected in the atmosphere of the places where its supposed product prevailed. Other objections might be added; but they would be superfluous.

Although still more palpably erroneous, not to say absurd, the hypothesis attributing bilious fever to carbonic acid gas has yet some advocates. But they are not numerous. Why they ever had an existence among physicians possessing any knowledge of that gas, is to me unaccountable. Its presence in the atmosphere is easily detected. But experiment proves that it does not exist in unusual quantities, in places where bilious diseases prevail. Much less does it exist in quantities proportioned to the amount of disease. If the report of a distinguished physician may be credited, the reverse is sometimes true. It is found in a comparatively diminished quantity in places of sickness. Fort Fuentis stands in a marshy and sickly district, at the mouth of the Valentine. Mount Legnone, one of the chain of the Grison mountains, which rises 8640 feet, French mea-

sure, above the level of the sea, is peculiarly healthy where it is inhabited, and its summit is covered with perpetual snow. In these places, when fever was raging in the low country, Gattoni made repeated experiments, and found, to his surprise, that, chemically speaking, the sickly atmosphere was the purest of the two. In other words, it contained the greatest amount of oxygen, and of course a diminished proportion of its other elements. The positive quantity of carbonic acid gas in each place was the same. For the accuracy of these experiments I am unwilling to vouch. I have already mentioned that those of a similar nature, in which I have been myself concerned, gave a different result. They indicated no difference between a healthy and a sickly atmosphere. The result of a series of experiments by Moschati was the same.

But this is not all. Every one knows that, in whatever way it may be applied, the effects produced on the human system by carbonic acid gas, are totally different from those that result from bilious malaria. No two classes of phenomena can be more dissimilar. Measles and influenza, scarlatina and small-pox, are much more alike. Were the hypothesis I am opposing true, the attendants on lime-kilns, where immense quantities of carbonic acid gas are hourly evolved, would never be free from bilious fever. Nor would the complaint fail to attack us by our fire-sides, especially in winter, when we consume oil in our lamps, and spermaceti in our lustres. Every Laplander's hut, moreover, during his long night of winter, would be a fruitful laboratory of febrile malaria. Yet throughout that period, in particular, he is a stranger to the complaint which that poison produces. Even the chemist in *his* laboratory, when preparing carbonic acid gas, would frequently suffer from his own experiments. In a more especial manner, were the notion true, what would become of our porter, ale, cider, champaigne, and soda-water drinkers, who are swallowing by the hour, deep potations of the reputed miasm? In that case, every butt of beer would be fraught with the seeds of bilious fever, and every brewery and soda-water fountain, as rich in poison as the Pontine marshes. The hypothesis is ludicrous, and were it not that it has received the sanction of physicians of standing, would be unworthy of a moment's serious consideration.

Another chemical notion respecting the cause of bilious fever, deserves, perhaps, a passing notice. It is that which attributes the disease to the hypercarbonation of the blood. This again, I say, is as empty a conjecture as has ever issued from the dreams of a visionary. The blood of patients in bilious fever, say its advocates, is always

preternaturally dark-coloured, from holding in mixture a super-abundance of carbon. Neither this position itself, nor the attempted explanation of it is true. As a *general rule*, the blood of patients in bilious fever is not preternaturally dark. It assumes that colour only under particular circumstances, which have no connexion with the amount of carbon in it. They are explicable only on a very different ground; and on that their explanation is easy. I venture to say, moreover, that the venous blood in bilious fever is more frequently preternaturally florid, than preternaturally dark. During the stage of excitement, if the reäction be strong, and the circulation free, its colour is always too high. Nor am I the first writer who has said so. The fact is recorded by Riverius, Cleghorn, and Huxham; and, if I mistake not, also by Sydenham and Rush; and I am confident it must have been witnessed by thousands of others. I doubt whether there is a practised bleeder in the United States, to whom it is not familiar. During the access and cold stage of intermitting fever, the blood is always dark, but becomes florid again in the stage of excitement. It is also dark in deeply congestive bilious fever, where reäction is suppressed; but in open fever of high excitement, the reverse is true. In fact, in every case where the circulatory system is torpid, or in any way wanting in action, and respiration deficient, the blood is, and by the laws of the animal economy must be preternaturally dark. But it never is, nor can be so, when circulation and respiration are vigorous and free. Were it admissible for me to dwell on it, all this is perfectly explicable, on principles which no physiologist would controvert. Nor has carbon any more connexion with the phenomenon, than it has in giving fragrance to the rose, or lustre to the sun. That it should, by intelligent physicians, be supposed to have, is matter of surprise.

Have chemists detected, by a fair and satisfactory analysis, a superabundance of carbon, in dark venous blood? Have they detected in it a particle more than is found in the florid blood of the arteries? The annals of their profession cannot reply to these questions in the affirmative. Or if they can, I know not where the record is to be found. Conjecture indeed has said yes; but fact has not concurred with it. Again: does a mixture of carbon with bright arterial, convert it into dark venous blood? No physician of reputation will contend that it does. I, on the contrary, assert that it does not. I have witnessed the experiment, and know that I speak correctly. The hypothesis is but an abuse of animal chemistry which should receive no countenance from real physiologists. Were I to say the same in general of chemistry, as applicable to the functions of living

matter, I might set opposition at defiance. It neither performs any of them, nor aids in the performance. Within its proper sphere, that science is delightful and important. None can be more so. But it is concerned exclusively with dead matter. With life and all its attributes it is at war. It is the great antagonist of life, and life of it. It is no more suited to explain a single function of living matter, than the laws of life are to explain the formation of carbonate of magnesia, or Glauber's salt. When an attempt is made to expound by it a vital phenomenon, it is dislocated and misapplied; and that dislocation, like every other, proves a source of mischief. The harmony of nature consists in every thing producing after its kind. Abrogate this law, and chaos is recalled. Chemical causes, therefore, can produce only chemical effects, and vital causes vital effects. They are not transmutable in themselves or their action. Physiologists would escape an infinity of trouble, and the profession no less confusion and error, were chemists to confine themselves to their proper laboratories, and to dead matter. The living body of man is as completely without their sphere, as its structure and economy are beyond the imitation of the manufacturer of chess-playing automatons, and rope-dancing harlequins.*

* It is in vain for M. Broussais, and other animal chemists, to endeavour to explain away the error they propagate and the mischief they do, by the terms they employ. To tell us, that, by "animal and vegetable chemistry," they mean the mutual action, in the form of decomposition and recomposition, of the "radical molecules of organized matter, *under the controul of the vital principle,*" is of no avail, as to the object they profess to have in view. Chemistry is a technical word, possessed of a definite meaning. For centuries it has been the representative of certain changes in the composition and qualities of matter, produced by affinity and repulsion, under the influence of given laws. Nor is there between those changes and the phenomena of life the slightest similarity. They are, on the contrary, the antipodes of each other. Dissimilitudes stronger than those which exist between them can scarcely be imagined.

Yet when the changes in living matter are said to be produced by "animal chemistry," nine persons out of ten, I might say ninety-nine out of a hundred, attribute them to the agency of the *common* chemical affinities; I mean the chemical affinities of the laboratory. They consider respiration, digestion, and other vital functions as belonging to the same class of processes, with the combustion of charcoal, the decomposition of water, and the formation of neutral salts.

Thus is error propagated by an *improper use of words.* Nor does there exist for that use the slightest necessity. The expressions, *animal action, vegetable action,* or the more general one, *vital action,* would be much better than *animal, vegetable,* or *vital chemistry.* The former, although not explanatory of any thing, do not mislead; whereas the latter do. I need scarcely add, that every phrase which propagates error ought to be erased from the language of science.

There are not wanting chemical physicians who would identify yet other gases with the malaria productive of bilious fever. Of these substances some are sulphureted hydrogen gas, phosphoreted hydrogen, and I believe carbonated hydrogen, with perhaps a few others. As relates to all of them, a single remark is sufficient to subvert the hypothesis which embraces them. Not one of them can be detected in the atmospheres of places where bilious fever prevails. Agitate, with a stick, the bottom of a pond, where masses of vegetable relics exist in a dissolving state, and some of them will indeed rise to the surface of the water, and may be ignited. But examine the atmosphere only a few feet distant, and no trace of them will be found in it. To this may be added, as another objection, that no application of these gases to the human body can produce any form of bilious disease.

Another hypothesis respecting the malaria in question, which has found advocates of some respectability is, that no such poison exists: but that bilious fever results exclusively from heat, moisture, and vicissitudes in temperature. My reply to this notion shall be brief, but I trust satisfactory.

When yellow fever prevails in a city, it is often arrested, in its progress, by the interposition of a street not more than sixty feet wide. It advances to the east or the north line of the street, but goes no further. Almost all the inhabitants on that side suffer; and all those on the opposite one escape. Such a case I have repeatedly witnessed, and therefore speak confidently of it. Many others have witnessed it also. Of oriental plague the same is true.

How is this phenomenon to be expounded? Place on each side of the street a thermometer, a barometer, a hygrometer, and a pluviometer, and they will show the atmosphere to be, in both places, precisely alike in temperature, weight, and moisture, as well as in the changes it undergoes, and the rain it precipitates. To no difference, in these respects, then, can the difference in healthfulness be ascribed. But one source of solution remains. The disease arises from a subtle poison, which reaches the street, but does not cross it. A stream of water of moderate width has arrested the progress of sickness on the same principle.

Again. Yellow or common bilious fever is raging along the bank of a large river, or some other body of navigable water, and a ship is lying in it, at cable's length from the land. Provided the vessel be kept clean, and her government be judicious, the crew will continue healthy, unless they are permitted to visit the shore; in which case they will suffer from the prevailing disease. This is a common oc-

currence, which no difference in the sensible qualities of the atmosphere can explain. No difference indeed exists in them. At the edge of the water, and seven hundred feet distant from it, where the ship lies, those qualities are the same. But there is a miasm at the former place, which does not reach the latter; and hence the difference, as relates to disease.

Some of those who deny the existence of malaria, attribute bilious fever to the deleterious influence of atmospherical moisture alone. Were this hypothesis true, no maritime situation could ever be healthy. The atmosphere of such places being necessarily surcharged with humidity, bilious fever would be an annual scourge to them. It would be rather perennial, prevailing during the winter as well as the summer; the atmosphere being humid throughout the year. But if free from swamps and marshy ground, maritime situations are peculiarly healthy. Of insular places, especially small ones, the same may be said. The marine air sweeping entirely across them, their atmosphere is saturated with moisture, and often darkened by fogs; and yet they are among the healthiest spots on earth. Bermuda, the Bahamas, and particularly most of the Scottish isles are of this description. The atmosphere of a vessel at sea is necessarily very humid. Yet, provided she be clean and well-governed, she is always healthy. To neither humidity, then, nor any other sensible quality of the atmosphere, can bilious fever be reasonably ascribed. It is the product of an aerial poison, significantly enough denominated malaria, whose effects alone on the animal kingdom proclaim its existence.

2. *From what source or sources does bilious malaria arise?*

From vegetable and animal matter, more especially the former, in a state of dissolution. I say "dissolution," not putrefaction; because there is good reason to doubt whether that process, in the technical meaning of the term, be necessary to the result. Bilious fever, in all its varieties of type and degree, often prevails in places where no putrefaction is discoverable. But dissolution, by which I mean the decomposition of dead organic substances, and the reünion of their elements, producing new compounds, is present. In no other way can the malaria be formed. At least it never manifests itself, except in situations where traces of the process referred to appear. That my remarks may be the better understood, when I shall speak hereafter of the prevention of this miasm, I must treat of its production somewhat circumstantially.

The medical world is in the habit of referring to LANCISI as the discoverer of the malaria of bilious fever. In a certain view of the

subject, I have already admitted that the reference is correct. He was so far the discoverer of it as to be the first to pronounce it the *azotic* or lifeless result of the chemical dissolution of vegetable and animal substances, and to bestow on it a name expressive of what he considered its nature. Others, who had spoken of it, believed it to be, as will appear presently, not *dead* matter, but a countless brood of animalculæ, infinitely small. He called it *paludum effluvium*—marsh exhalation—because he believed a marsh, lake, or some other form of stagnant water necessary to its production. But he was far from being the first to indicate fens and marshes as sending forth, directly or indirectly, vapours and other kinds of matter productive of bilious and pestilential diseases. In expressing their conviction of the pestiferous influence of such places, the ancients were as clear and decided as he was. But they spoke in poetry, he in prose; they in the language of fiction, he in that of philosophy. Each treated the subject in the spirit of the age in which he lived. Had he been an ancient Greek or Roman, he would have derived the poison from the breath of the Python, or the Hydra, (two words which, united, signify *putrid water,*) and had CELSUS or GALEN lived at the beginning of the eighteenth century, either of them would have pronounced it the result of the dissolution of organic matter. So true is it that men often attain to high renown, for promulgating opinions and doctrines believed to be entirely their own, but which, in fact, belong, in a great measure, to the periods in which they live. Their predecessors had sown the seed, and they appeared at the proper season to reap the harvest. Had they not been born to do it, others more fortunate would. This is true of every discoverer, however illustrious. Had neither COLUMBUS, NEWTON, nor FRANKLIN seen the light, others would have appeared about the same times they did, to discover a new world, unfold the laws of material creation, and prove the identity of electricity and lightning.

Centuries before the time of Lancisi, true poetic fiction, respecting the cause of the pestiferous influence of marshes, had given place to what might be called philosophical hypothesis; I mean certain views or notions, which their authors believed to be true, but of which they had no substantial evidence. They were the grave but visionary conjectures of the cloisters, sanctioned by the solemn dogmas of the schools. They marked the transition state of the human intellect from real fiction to real philosophy. Many writers, before the age of Lancisi, declared the cause of bilious fever to be the offspring of putrefaction. But, as already observed, they deemed it animalcular. They were believers in equivocal or elementary generation. In their

opinion, therefore, putrefaction in marshes produced myriads of animalculæ, too minute to be detected by our senses, or to become cognizable in any way, except by their effects on larger forms of living matter. These monads of life, as small and as numerous as particles of air, made their way into the human body by the pores of the skin, or in some other manner, mingled with the fluids, pierced and poisoned the solids, and spread corruption through the whole. Then, propagating their like with wonderful fecundity, they issued from the bodies of the sick to invade those of the well, and thus the disease was rendered contagious. This hypothesis of animalcular contagion, however wild and irrational it may be deemed, has its advocates even now. Lancisi had only to exchange the generation of poisonous animalculæ by putrefaction, for the generation of a poisonous gas, and his work was done. Nor does the exchange seem difficult. On the contrary, it was easy and natural, because all things were prepared for it. If he had not made it, therefore, somebody else would have done it in his place.

Let it not be imagined that I mean by these remarks to detract from the just reputation of the illustrious Italian. Far from it. No one does homage more sincerely than I do, to his talents and services. He was one of the great promoters of medical science of his day. But, had he lived at an earlier and darker period, he would have been less fortunate, because all things would not have been matured for the discovery. He would not, therefore, have been the author of it, but it would have been reserved for another. Hence, in what I have said respecting him, I only mean to give a correct representation of the progress of the human mind in the attainment of knowledge. This concerns the history of general science as well as of discovery, and should be known to every student of nature.

Lancisi, then, finding opinion in the state just represented, advanced it another step, by pronouncing the poison which had almost desolated the country around Rome, the issue of putrefaction, in the form of gas, instead of animalculæ. Nor did he issue his belief in the shape of mere conjecture. He sustained it by an array of facts and arguments, which all his enemies and competitors for fame were unable to shake. He was as fortunate in proving that bilious fever is the product of a poison resulting from the dissolution of dead organic matter, as HARVEY was in proving the circulation of the blood; and he had certainly a more intricate subject to handle. As relates to the mere establishment of the fact, nothing material has been since added; nor do I know that any thing such remains to be added, to what is contained in his admirable work, "*De noxiis paludum effluviis.*"

The substance of all that has been said in support of the doctrine by subsequent writers, is there condensed in a style and manner that bespeak alike the strength and independence of the writer, the accomplishment of the scholar, and the resources of the philosopher.

But was Lancisi correct in the name he affixed to the malaria he discovered? Is it really *paludum effluvium?* Is a marsh or fen necessary to its production? No, it is not; and much evil has arisen from the mistake of looking to such places alone for its formation. Thousands of individuals have fallen victims to the error. The Italian discoverer convinced himself that it issued in abundance from the Pontine marshes, and the Campagna di Roma with its numerous ponds, and thence inferred that such collections of stagnant water were essential to its generation. But he was mistaken. The most terrific calamities it has ever produced, have occurred where there were neither fens nor marshes. Witness yellow fever in the cities of the United States, of the West India islands, of tropical America, and the south of Europe, and true pestilence in those of Asia and Africa. That the miasm is generated along the borders of marshes is true; but perhaps the bodies of such places never produce it. Or if they do, their water absorbs it again, and prevents it from doing mischief. That fluid has a strong affinity for it. Hence the centre of large swamps is often a place of health. Labourers in cypress swamps rarely suffer from bilious fever; the more especially when they are remote from the borders of them.

Am I asked then, what is essential to the production of malaria? I answer, four elements, dead vegetable matter, a high temperature, atmospherical air, and water in moderation. What particular part of the process depends on atmospherical air I know not. But there is reason to believe that some part of it does. When speaking of the generation of the miasm, therefore, I shall always suppose the presence of air. In citing vegetable matter as one of the elements in the production of malaria, it is not my intention to exclude entirely animal matter, especially that of animals of the lower classes. It is quite probable that that may unite with vegetable matter in the process of dissolution, and aid in the general effect. My only object is to express my belief, that the latter is greatly superior in quantity, and therefore more extensively tributary to the formation of the poison.

Whenever these elements meet in due proportion, and continue together a sufficient length of time, malaria is the issue. But if one or more of them be absent, the miasm is not formed. Is heat wanting as in winter? No poison is generated. Is moisture wanting, as is the

case during part of the summer, in the Delta of the Nile? Malaria is also wanting, and health prevails. Is perfect cleanliness preserved by the removal of all dead vegetable and animal matter? The production of the poison is impossible. The same is true, if water super-abound, so as to flood the vegetable mass. Too much water is as fatal to the process, as perfect dryness. Hence, Egypt is healthy, while inundated by the Nile; and when, in consequence of inordinate rains, a marsh is entirely overflowed, it ceases for a time, to be a source of sickness.

That malaria may be generated, it has been pronounced necessary that its elements be together "in due proportion," and "a sufficient length of time." But facts are wanting to warrant a decision, what either the exact "proportion," or the "time" should be. Observation seems to teach us, that in the United States, the production of yellow fever requires at least a month's continuance of tropical heat. After that duration of such a temperature, unless the general constitution of the atmosphere forbid it, the danger becomes threatening. Such was certainly the case in the city of Philadelphia, during the pestilential period, which lasted from 1793 until 1805. Records can be produced to show, that throughout that term of years, yellow fever never failed to appear in greater or less extent, after the above mentioned continuance of tropical heat. Nor did it ever occur under a temperature of less intensity and duration.

Does any one doubt whether the agents here cited are the real elements of bilious malaria? I reply, that the evidence to that effect appears conclusive, and that the doubt is therefore groundless. As already stated, wherever the agents referred to exist, the poison manifests itself in the production of some form of bilious disease. And where they do not exist, no such manifestations are made. The more abundant the agents are, in due proportions to each other, the more extensive, and usually the more violent is the complaint; and nothing but themselves is known to be necessary to the effect, or in any degree auxiliary to it. Add, that the disease prevails more certainly and generally in their vicinity, than at a distance from it, and the evidence I repeat would seem to be conclusive. But perhaps it may be the wish of some to have a few exemplifications on the subject; if so, the following are submitted to them.

In all large and crowded cities in the United States, and other warm climates, heat, moisture, and dead vegetable and animal substances abound in mixture with each other, and unite in their action. The consequence is known. In such places, bilious complaints are an annual evil; and they are usually graduated by the amount of the

agents which the places contain. It is believed that they would be always thus graduated, did not a peculiar constitution of the atmosphere at times interfere. Of the borders of swamps, marshes, and large rivers that overflow their banks, the same is true. There the elements of malaria are found in sufficient abundance; and there also disease prevails. Alluvion is composed, in part, of vegetable and animal relics; and in no portion of our country is either heat or moisture wanting. In every alluvial district, therefore, in the United States, the agents necessary for the production of miasm exist. Here again the issue is the same. Such places are visited annually by bilious complaints. The condition of health during summer and autumn, in the low grounds of all large rivers may be safely offered in proof of this. Again. Rich soil of every description, whether it be alluvial or not, contains, of necessity, a considerable portion of animal and vegetable remains. On these alone its fertility depends. Such soil then, is copiously impregnated with one material of miasm, greatly comminuted, and in a state of high preparation to coöperate with the others. Nor is there any climate where heat and moisture are always wanting. Hence, in every region, fertile districts are visited at times by bilious complaints. To this it is believed that the chart of the world does not present a single exception. The event occurs more uniformly and distressingly, and is therefore more noticed in warm climates. But it occurs more or less in every region inhabited by man. Although the fervours of the line peculiarly favour it, the rigors of the north do not forbid it. Were I inclined to moralize, I might say that it seems like an impartial provision of nature, to counterbalance the advantages of a fertile soil and render all places nearly equal, as respects the enjoyments and happiness of their inhabitants.

The reverse of the picture here presented is not less favourable to the opinion I am maintaining. In the soil of sandy plains, remote from rivers, lakes, and other large bodies of water, and somewhat elevated, vegetable and animal relics have scarcely an existence. Nor are malaria and its effects the scourge of such places.• Whatever may be the amount of heat and moisture they experience, the inhabitants are exempt from bilious fever. The reason is, the absence of vegetable and animal remains. In proof of this, the pine lands of the Carolinas, Georgia, and Louisiana, which are elevated plains of sand, afford, during the summer and autumn, a healthy retreat from the diseases of the maritime and fluvial districts. Further; hilly and mountainous regions are not more remarkable, throughout the world, for their barren soil, than their salubrious atmosphere. Hence,

in contrasting the poverty, health, and hardihood of the Swiss, with the luxurious ease and effeminacy of the Italian, the poet expresses himself in the following strain, whose sentiment is as correct, as its diction is nervous.

> "My soul turn from them, (the Italians) turn we to survey
> Where rougher climes a nobler race display,
> Where the bleak Swiss their stormy mansion tread,
> And force a churlish soil for scanty bread;
> No product here the barren hills afford,
> But man and steel, the soldier and his sword."

Of all this the reason is plain. The soil of hills and mountains contains but a small portion of vegetable and animal remains in a dissolving condition. It is wanting, therefore, in one of the elements of febrile miasm. The issue is in conformity to a law of nature. The cause being absent, so is the effect. No malaria in the atmosphere, no disease among the inhabitants. Such is the case, throughout the world. Withhold from any place heat, moisture, or vegetable and animal remains in a state of dissolution, and it will be exempt from miasm and bilious complaints. Unite them under the circumstances already indicated, and the reverse will be the consequence. Malaria will be generated, and disease will prevail.

Am I asked whether large masses of animal matter alone, especially the matter of the higher orders of animals, such as corpses in crowded cemeteries, and the carcasses of men and horses in besieged towns, and on the field of battle, ever produce bilious fever? To this question I can reply only as a reader of books, and a listener to reports; and those sources of information are self-contradictory; being, in some instances, affirmative, and in others negative. From personal observation I know but little of the matter. If I am not mistaken, I have seen yellow fever produced in a city, by putrid oysters, fish, and hides; the last of which articles belong to a high class of animals. Whether the same result would be produced, on a field of battle, in the free and open air of the country, some may deem doubtful. Many reports, however, not unworthy of credit, are strong and positive in affirmation to that effect. Were I to hazard an opinion on the subject, it would be, that wherever found, large masses of animal matter, in high putrefaction, may generate a poison productive of fever. That such is the case in the semi-stagnant atmospheres of cities, does not, I think, admit of a doubt. Had I leisure to dwell on the subject, it would be easy to show, that the immense exhumations of dead bodies in Dunkirk and Paris, with

other analogous facts related by Dr. Bancroft, furnish no evidence subversive of this belief. But I am not persuaded that the poison is the same with that of common bilious fever. Facts seem to justify a contrary belief. The latter being chiefly of vegetable, and the former exclusively of animal origin, they can scarcely be identical. The diseases, moreover, which they produce, differ not a little in type and character. Fevers resulting from an animal miasm are more continued in their form; those from a vegetable one less so. Other evidences of a difference between the two miasms exist. But as the point is not essential to the present inquiry, I shall not dwell on it.

Different opinions are held respecting the influence of the exhalations from slaughter-houses, and from soap, candle, catgut, and glue factories, on the health of the neighbourhoods in which they stand. Most persons pronounce these effluvia deleterious; while a few have contended that they are not only innocent, but actually salutary. I am but little inclined to become the advocate of either opinion. That any exhalation from dead matter mingling with the atmosphere, is positively healthy, I do not believe. I am not sure that even the fragrance of incense or the perfume of flowers is so. On the contrary, I apprehend they are not. The freer the air is from every foreign mixture, the fitter it is for respiration, and the more subservient to the preservation of health. But while I admit that the exhalations under consideration do harm rather than good, I have no reason to believe that they produce yellow fever, or any other bilious affection. I have repeatedly examined the slaughter-houses, and the factories just designated, of some of our large cities, with a view to satisfy myself as to the influence of their effluvia. The odour they emit, though offensive, is not sickening. Nor is it the issue of that far-gone putrefaction, which, in the substances concerned, would seem necessary to the production of a febrile poison. Such putrefaction would render the articles subject to it unfit for use. They are therefore worked up, before they reach it in the changes they undergo. Nor is this all. There are yet stronger reasons for doubting the pestiferous qualities of the effluvia I am considering. Those persons most subject to their action are not injured by them. Butchers, and workmen in the factories mentioned, enjoy as good health as any of their fellow citizens. Be the cause what it may, the former are even proverbially healthy and robust. Nor is the health of the neighbourhoods immediately exposed to the exhalations, in any measure harmed by them. Throughout the year, it is no less perfect than that of other places. For these reasons, I cannot con-

cur with those, who denounce the places referred to as sources of malaria.

The precise degree of moisture most favourable to the production of bilious miasm has been lately a theme of inquiry and discussion. And perhaps the question is not yet decided. An article on the subject was published about ten years ago, by Dr. Ferguson, of the British military staff, in Vol. IX. of the "Transactions of the Royal Society of Edinburgh," and republished, with commendations, in Vol. VII. of the "Philadelphia Journal of the Medical and Physical Sciences." In that paper, which has attracted more attention than it deserves, the author professes to teach physicians something new. as respects the production of febrile malaria. more especially as relates to its connexion with vegetable and animal matter, and the amount of moisture requisite to the process. But as far as fact and useful information are concerned, he professes only. Actual performance, in any part of the effort, is looked for in vain. The only thing new contained in his article, consists in a few inferences and notions. which are manifestly erroneous. Many of his facts are indeed *individually* new, because they had not been previously reported. But, *in kind*, they are as familiar to the enlightened portion of the profession as any others connected with medicine. They tend to show that but a small proportion of water is requisite to the formation of bilious miasm, and that therefore marshy and flat alluvial situations. which are healthy in wet seasons, because they are flooded, are sickly in arid ones, because they are drier. Such, I say, is the only purport of his *facts;* and it was as well known to the faculty half a century ago as it is now. Almost every author of reputation that has written within that period on the connexion between bilious fever and the character of the weather, has recorded his testimony to that effect. Nor does daily observation withhold its concurrence. Those who live near mill ponds are perfectly aware, that in wet seasons, when the ponds are full, the neighbourhoods around them are much healthier, than in dry ones, when their waters are low, and a line of alluvial deposit along their edges is exposed to the sun. Respecting swamps, marshes, and rivers, the same is true. When flush in water during rainy seasons, they do no injury to the health of those who inhabit their vicinity. But when their waters are deficient, in consequence of a drought, and their alluvion uncovered, they become sources of miasm, which produces disease.

Such, I repeat, is the amount of all that Dr. Ferguson's facts are calculated to teach us, in case we had been ignorant of it. But it

is not all he professes to teach. If he has not expressed himself in a way to conceal or pervert his meaning, he wishes to establish the notion that bilious malaria may be generated without the agency of either water or vegetable and animal relics. Speaking on this subject, he says, "as is the *dryness* of the soil, so is the *quantum* of sickness." In other words, the drier the soil is, the more miasm it produces. Render it therefore perfectly waterless, and you raise to its *maximum* its productive power. If this be not a correct interpretation of the doctor's expression, and a fair inference from it, the fault is not mine. He ought to have used a less equivocal form of diction. Again, says our author, "One only condition, then, seems to be indispensable to the production of marsh poison, on all surfaces capable of absorption, and that is the paucity of water, where it had previously abounded." If this sentence has any definite meaning, it is as follows. Wet sufficiently any surface capable of absorption, and suffer it to dry again, (in doing which you have in it a previous abundance, and a subsequent paucity of water,) and you will produce bilious miasm by the process. Is this true? No, certainly, every sophomore in medicine knows it is not. A bed of pure alumine, of calcareous or silicious earth, or even a pure but porous sand-stone constitutes a surface "capable of absorption." But the mere wetting and drying again of these will produce no malaria. The fancy is absurd. When thus presented in its nakedness, Dr. Ferguson will not himself advocate it. Mix vegetable and animal relics with those articles, and then wet the impure masses, and suffer them to dry again, exposed to a hot sun, and, in the course of the process malaria may be generated. But to produce it by our author's process is impossible. Other parts of the doctor's paper are also at war with science. But being less relevant to the present inquiry, I shall not notice them. It may not, however, be amiss to observe, that an article of more merit, from an American pen, would have been less valued by a great body of American physicians. Our professional spirit is still colonial. It retains not a little even of the nursery. An offering of food from the "mother country," no matter how indifferent its character and cooking, is prized above all that can be prepared at home. Although this is not true in every case, it is so to an extent that is humiliating. Thus the visions of Dr. Barry, about "venous circulation," became for a time, and perhaps still continue, the "paramount law," with many physicians of the United States. Yet never were fancies more unfounded. But to return.

3. *What are the best means of preventing the formation and removing the sources of malaria?*

To this great practical question, *on whose solution*, and the measures founded on it, depend the health and lives of millions, an answer may be rendered in a single word—*cleanliness*. Nothing further than the preservation of this can be done, nor is any further necessary, to "remove, (or destroy,) the sources of malaria," which will, of course "prevent its formation." All real filth consists in a mixture of two of the elements of bilious miasm; water, and vegetable and animal relics. It has been already shown, that without such mixture that poison cannot be formed. The removal or destruction of the mixture constitutes cleanliness. By that process, then, I repeat, and by that alone, can the production of bilious malaria be prevented. Over atmospherical heat in the warm climate of the United States we have no controul. It *will* visit us in the summer, and part of the autumn. Nor could we subsist without it. Our exemption, therefore, from the effects of the poison, can arise only from the adoption of proper measures, as to the other two elements of it.

Am I asked in what way the requisite cleanliness can be preserved? I reply that the process is different in different cases. Nor is it possible for me to treat the entire subject in detail, without extending my dissertation to a volume. I can do nothing more than speak in general terms of the means of preserving cleanliness in a few instances. Nor is more requisite. The same principles are applicable in every case. When fully understood, therefore, they can be employed universally, without further instruction.

Man works wisely and successfully only when he imitates nature. As often as he opposes her, or deviates from her economy, he suffers disappointment; if not misfortune. Let him receive his lessons and procure his means of operation from her, and he will rarely fail to attain his ends. Her chief agents in producing and preserving cleanliness are four; pure water, pure air, fire, and active vegetation. Add to these, certain large voracious animals, and hosts of small ones, that feed on carrion, offal, and other sorts of filth, and the catalogue is sufficiently full for my purpose. She never employs, with this intention, smoke, suffocating fumes, or strong and offensive odours. Nor ought man to do it. By the judicious management of the agents just enumerated, he can do all that is required of him, in the removal and destruction of nuisances injurious to his health.

Is personal cleanliness the object in view? By water, soap, and towels, it is easily compassed. And in the removal of the causes of

disease, and the general maintenance of health, it is a measure of much more importance than it is commonly supposed to be. I wish there were less ground to add, that it is too much neglected in the United States.

Is a house or ship to be cleansed? Unite to the means just directed, brushes, sand, and free ventilation, and success, in most cases, is certain. Foulness beyond the reach of these can be subdued only by fire, which is competent to the purification of all things combustible. Smearing with lime, commonly called whitewashing, is but a slovenly substitute for real cleanliness. It conceals filth, but does not remove it. It is indeed but the substitution of one evil for another; a less for a greater; but still an evil. Yet it is one of the best means, in cases where the employment of water is forbidden by causes that cannot be controlled. But it should never be used for the purification of any thing constructed of wood. Painting is a mode of covering filth equally effectual, and more durable. In all wooden fabrics, therefore, it is entitled to a preference. Whitewashing is a common expedient for the purification of foul ships, in quarantine establishments. So is fumigation by the combustion of certain substances, some of them odorous, as well as by gases otherwise produced. The practice is in both cases empirical. I know that this sentiment is not considered orthodox. Legitimacy and fashion, which too far sway the world, are against it. No matter. It is not, on that account, the less true. Orthodoxy is but opinion sanctioned by authority; but, in the present case, there is no divine right to dictate. What is the avowed object of whitewashing and fumigating? To neutralize febrile miasm, real or imaginary. If no such miasm exist, the practice is superfluous, and the time and means spent in it are thrown away. If it does exist, what are its nature and affinities? No one knows. To pretend to neutralize it, therefore, without such knowledge, is palpable empiricism, not to call it imposture. It is as bad as the exhibition of a patent remedy to cure a disease, of whose seat and character the exhibitor is ignorant. The nostrum is as likely to destroy the patient, as to remove the complaint. The whole is haphazard and deception, and ought to be discountenanced by the friends of science. It checks rational inquiry, and retards improvement. Confidence in imaginary means is hostile to the discovery of real ones. It renders men content with the present, and improvident as to the future. True, we see certificates from physicians, of the efficacy of fumigation, in cleansing foul and sickly ships and hospitals, and rendering them sweet and healthy. So do we of the infallibility of Swaim's panacea, in the cure of disease. And the tes-

timony is as valid in the one case as in the other. In both, it is an outrage on rational medicine. Combustion excepted, I repeat, that thorough washing and ventilation are the only certain means discovered, to purify foul and sickly ships, and render them the abodes of cleanliness and health. Of hospitals and infirmaries the same is true. In them also painting and whitewashing are the best substitutes for real purification. They are, however, only substitutes, and should never be adopted but in cases of necessity. And they should be preceded by cleansing with soap and water, in every instance where no paramount reasons forbid it. As far as real purification is concerned, they are much more ornamental than useful. The cleanliness they produce is seeming rather than real.

There is no edifice that may not be kept sufficiently pure by the means here indicated. It is not only useless then, it is injurious, to fill the wards of receptacles of the sick with suffocating and irritating fumes and gases, to the annoyance and distress of patients with tender eyes and weak lungs. I have never seen a place thus fumigated, without exciting among the sick painful coughing and other disagreeable affections. And if disinfection seemed to be the result of the process, it was owing to the other means used at the same time, and not to fumigation.*

Is a city to be depurated of the filth which threatens to produce a pestilential disease? The work must be done by scavengers, carters, and watermen. The two former must remove the filth that lies in masses, and the latter must follow them and wash away the remains. Mere scraping and shovelling do but little good. They remove what is unsightly, and some of that which offends the smell, and there their action ceases, much of the nuisance still remaining. Water

* Shall I be told, in objection to my opinion on this subject, that chlorine gas and some others destroy the fetid exhalation emitted by putrid animal matter, and in that way contribute to purity? The fact is known to me, but it is also known that such exhalation is not the febrile miasm of which I am treating? That poison exists in its most virulent and destructive condition, unaccompanied by any odour. It does not follow, therefore, that because chlorine gas destroys the fetor arising from the dissolution of animal or vegetable substances, it will also destroy the poison. This loose substitute for reasoning is an abundant source of error and mischief. Nothing but an accurate and successful experiment is competent to prove that any known gas is capable of uniting with febrific malaria and neutralizing it. And as far as I have been able to inform myself, such an experiment has never yet been made. Hence the belief in the antimiasmatic properties of the gases referred to is nothing but hypothesis.

alone can carry that away. And, to be efficient, the washing must be executed with a degree of care and accuracy greatly beyond what is generally observed in it. It might as well be entirely neglected as performed in the usual slovenly manner. Forty-nine times out of fifty, filth enough is left in the streets and gutters of *one* city to infect and sicken a *dozen*. Hence our constant summer and autumnal complaints. The process of cleansing fails in preventing disease, not because it is imperfect in its *nature*, but because it is *imperfectly performed*. Such indeed is the ground of most failures; faithless and defective execution, rather than unsound principle. Many more persons die from a partial observance or an actual violation of medical directions, than because the directions are erroneous or unwise. Even a bad system, judiciously administered, is a less evil than the wisest system mismanaged or neglected. To the truth of this, experience in every kind of government, whether public or private, abundantly testifies. Hence the lines of the poet may be received as a maxim:

> "For forms of government let fools contest,
> That which is best administered is best."

Nor is this more obviously true, in any case, than in the cleansing ot streets. If they be not thoroughly purified, they might as well be left untouched. Filth, thinly spread over a wide space, is much more deleterious than when lying in a denser layer over a smaller space. This, with the reason of it, must be obvious to every enlightened physician. And as practised by scavengers, the cleaning, so miscalled, is but little else than a *spreading* process. It extends the limits of the nuisance which it is designed to remove, by drawing feculence from the gutters into the streets. If the filth, being half an inch deep be reduced to the twentieth of an inch, its power to injure is not lessened. It is from its surface, on which the heat immediately acts, and not from any distance beneath it, that the miasm issues. I speak from oft-repeated observation in declaring, that I consider street cleaning, as usually performed, one of the most serious abuses committed against the inhabitants of a city. It begets confidence only to betray, and promises health only to destroy it. To be convinced that I speak truly, it is only necessary to follow and examine attentively the track of a gang of scavengers when they are removing filth. They have evidently no correct knowledge of the purpose for which they are working; or if they have, they wantonly disregard it. In violation of their duty they leave much filth behind them, and thus endanger the public health. Unless this grievance be remedied, and real instead of pretended purification be practised, we shall look in

vain for any marked amendment in the health of our cities. Nothing but a thorough lustration will serve. True, compared with former times, the condition of cities, in point of cleanliness, is much improved. And the fact amounts to an argument that nothing can shake in favour of the position for which I am contending. Their health is improved in an equal ratio. Authentic records tell us, that when London and other large European cities were visited frequently by pestilential diseases, their streets, squares, and dwellings, as well as their environs, were filthy almost beyond conception. I hazard nothing in stating my belief, that there exists not on earth a single city, that may not, by a strict observance by its inhabitants of a judicious course of diet and regimen, and a degree of cleanliness perfectly practicable to an efficient police, be rendered a safe habitation to man, I mean throughout the year. To this neither Grand Cairo, Aleppo, New Orleans, Havanna, nor any other city in tropical America constitutes an exception. But to attain an end in all respects so desirable, the police must be enlightened, faithful, and vigorous. It must be administered by officers who know what cleanliness is, how to appreciate it, how to produce and maintain it, and who will be vigilant and resolute in the performance of their duty. And this is a spectacle I have never yet witnessed. Never have I seen the health of a city under the guardianship of a police that seemed either to understand the true meaning of *purity*, or to be willing to encounter the labour and trouble necessary to enforce it. I say "enforce," for unless compelled to the observance of it, adults are as negligent of cleanliness on and around their premises, as children are; or as if they took delight in associating with filth. Nor does their carelessness escape with impunity. To this negligence much of their suffering from sickness is to be attributed.

No large city can be effectually purified, except under an arrangement by which clean water can be made to flow actively along the gutters several hours every day. The degree of inclination of the streets, therefore, should be carefully suited to this purpose. Nor, during warm weather, should this mode of washing them ever be neglected. By means of it much filth will be carried off, which would otherwise remain, to discomfort the inhabitants, and injure their health, There is, moreover, in the view of cool, limpid, running water, something exceedingly pleasant to the eye, and exhilarating to the spirits; a condition of things much more favourable to health than offensive prospects, with dejection and gloom. It betokens purity; the very idea of which is valuable, and tends to produce the thing suggested. There is a much stronger and closer connexion be-

tween internal and external purity than is generally imagined. The one is the natural expression of the other; and they impart to each other mutual strength.

Is the city checkered by vacant squares, public or private? Unless it be forbidden by insuperable causes, let them be enclosed with palisades, or some other kind of open work, sodded, or otherwise covered with grass, and suitably shaded and ornamented with shrubbery and trees. The addition of fountains and open reservoirs of water will greatly enhance their usefulness and beauty. Improvements of this description, when well regulated and turned to the proper account, are not places of mere pleasure and luxury; they are means of real comfort and sources of health. They are eminently useful as a resort of children, for air and exercise, under the care of their nurses and attendants. Adults also may advantageously avail themselves of them, for the same purposes. Nor should their benign influence on health, as places of amusement, social enjoyment, and pleasing contemplation, be overlooked. Considered in all their qualities and bearings, they constitute a *rus in urbe* peculiarly desirable. Of the decorating of wide streets with rows of cleanly and beautiful trees, I am inclined to think favourably for similar reasons.

Although, as heretofore mentioned, I know of no instance in which cemeteries, slaughter-houses, tan-yards, or factories of soap, glue, or candles have injured the public health, yet they ought not to be situated in central or thickly inhabited parts of cities. To say the least of them, they are unsightly and disagreeable establishments; and admitting that they do not send forth *febrile* miasms, they certainly adulterate the atmosphere by their effluvia. It is alleged, moreover, and I apprehend not without cause, that cemeteries sometimes contaminate the waters of adjacent wells. Prudence, therefore, concurs with a love of cleanliness, in admonishing that all such places be without the city.

Much has been said and written to prove the bad effects of privies on the health of cities—more, perhaps, than, within the last and the present century, is true. When those places were above ground, and openly exposed, as was the case in former times, their pernicious influence could not be doubted. But constructed under ground, as they now are, and securely covered, they can scarcely, I think, be considered injurious to health. But they must be kept clean. I mean that their contents must not be suffered to rise near to the surface of the earth. If they be kept five or six feet, or perhaps even a shorter distance below it, and are sufficiently covered by a well-constructed building, the temperature of the air in contact with them will be

too low for the production of miasm. The amount of liquid, moreover, which they usually contain, is too great for that effect. But if not properly constructed, privies are much more likely than burying-grounds to adulterate the wells that are near to them. To prevent this, they should be lined with stone or well-burnt bricks, cemented with water-lime. This will form an impervious barrier to the escape of their contents, and render them harmless.* As relates to this point, however, a general system of water-closets, such as that which exists in London, is preferable to every other mode of cleanliness.

I know it is contended by many, that, whatever may be its accumulation or degree of exposure, human ordure cannot, under any circumstances, be converted into a source of febrile miasm. But I also know that the opinion is destitute of proof. All the facts adduced in support of it are necessarily of a *negative* character. Nor do they bear the slightest resemblance to negatives in grammar. No number of them that nature may present or industry collect, can ever make a *positive.* They therefore prove nothing. To establish probability is the utmost they can effect. As relates to the present topic, in every negative case that can be adduced, circumstances may have been wanting, which, had they been present, would have altered the result. But admit that human ordure alone cannot be rendered productive of malaria, the fact does not militate in the least against my position. It is well known that in cities, privies are made receptacles of other kinds of filth and feculence that may produce it. By neglecting them, therefore, health is endangered.

Is the city commercial and situated on navigable water? Let not the wharves be built exclusively of wood. Their facing at least

* To common-sewers, in cities, similar remarks are applicable. When skilfully constructed they are not dangerous as sources of disease. Give them sufficient depth, width, and descent, line them with brick or stone and water-lime, and make no more openings into them than are necessary, and they will send forth no miasm to adulterate the air. Their depth and covering will protect their contents from summer heat, and their width and descent will prevent stagnation. Under these circumstances, putrefaction cannot take place in them. Nor, if it did, could the gas produced by it escape in any injurious amount, except by means of too many openings. Sewers thus prepared may be kept so clean by currents of water being made to pass through them, that they can create no sickness. Nor will they contaminate wells or fountains in their neighbourhood, by the percolation of their liquid contents. Let them be sufficiently numerous to convey from the city its foul waters, and other recremental matter, and they will contribute greatly to the preservation of health. They will act like drains in marshy ground, the benefits of which will be spoken of hereafter.

should consist of stone or brick, else they will become in time masses of dissolving vegetable matter, and abundant sources of febrile miasm. That the cities of the United States suffer in their health, from this cause, cannot be doubted. Piles of decaying timber, alternately wet and dry, and exposed to the ardour of an American summer sun, must produce malaria as certainly and naturally as the influence of spring promotes vegetation, and the rigours of winter suspends it. In places where the tide rises and falls six or eight feet, it is not uncommon for the docks to be so shallow, that the immense beds of filth they contain become bare, and are exposed, during low water, to the action of the sun. While in this condition, the exhalation from them is often intolerably noisome and sickening. The filth accumulated in them, moreover, is usually of the very worst character. It consists of the vilest feculence, washed from the streets, alleys, and other places still more foul, by rains and water from other sources. When exposed, therefore, and acted on by the sun, it were superfluous to say, that it constitutes a laboratory of malaria, as fertile and threatening as imagination can conceive. I could name a city that has suffered greatly from this cause. The docks should be so deep then, as to have their bottoms always covered with eighteen inches or two feet of water. Nothing short of this can protect the city from the nuisance referred to. Appealing so strongly and offensively as it does to our sight and smell, to say nothing of our reason and sense of danger, the neglect in relation to it is surprising. The importance of remedying the evil, where it exists, cannot be too frequently or forcibly impressed on the guardians of the public health. It is believed that wooden wharves exposed to *fresh* water, are more pernicious in their influence on health, than when the water is *salt*.* But they are pernicious in every case, and should be therefore exchanged for brick or stone. Although they are not individually so serious a nuisance as foul and shallow docks, they are oftener met with. Their excess in number, therefore, so far tends to make the balance even, that perhaps they constitute, in mass, as great an evil.

* It is contended by some, on the authority of Sir John Pringle, that a small quantity of salt accelerates putrefaction, and that therefore timber and other vegetable matter wet with the water of seas and bays pass to dissolution more speedily than when wet with the water of rivers. This is a mistake. Salt never accelerates putrefaction, but always retards it. In its mode of effecting this, I take at present no concern. The fact is sufficient for my purpose; and that is certain. It is known to mariners that ships decay sooner in fresh water than in salt.

Tile and slate make a much better covering for city edifices than shingles. To say nothing of their greater durability, and the superior protection they afford from fire, they are exempt from dissolution, and do not contaminate the atmosphere around them, nor the rain that falls on them, to be afterwards received into cisterns for use. Of wooden coverings the reverse is true. Under the process of decay, they adulterate both air and water. Shall I be told that this is a very limited source of mischief? I know it; but it *does* mischief; and that justifies my reference to it. I do not call it great; but I say that masses are composed of molecules, and that it therefore adds to the aggregate of the evil. The collective mischief done to us through life, by small evils, which we neglect because they are small, surpasses that we experience from larger ones.

Is a fenny or marshy tract of country to be cleansed from the materials productive of malaria? A process must be instituted, founded on the same principles, but different in form and mode of execution from those just described. The entire scene being dissimilar, the success of the attempt to cleanse must depend, as in all other instances, on its correct adaptation to the nature of the case. It is to consist in sufficient draining and banking, and the judicious cultivation of the soil. The channels formed in the process, therefore, must have such an inclination, that the water they contain shall flow freely. Marshes and fens must be thus converted into fields, meadows, and gardens; and places where filth lay exposed and reeking with poison, must be clothed in dense and vigorous vegetation. This mutation of surface moreover must be general. To make it only in parts is but little better than lost labour. A few neglected spots, although they are small, will baffle hope and frustrate expectation founded on the cultivation of many larger ones. By the process here directed, man subserves a two-fold interest. He accumulates riches, and secures health. That from which neglect would distil a poison, industry turns to gold; and the vegetation sustained by masses of pollution, renovates the atmosphere, and renders it healthful. For vegetables not only feed on air that is foul, but send forth an abundance of that which is pure. In the course of improvement it is often found necessary to narrow and deepen wide and shallow streams by artificial banks. This change not only confines the water within more circumscribed limits; it accelerates its motion, and in that way contributes to the general effect. Other things being equal, the swifter the current of a stream, the less febrile miasm arises from it. To aid in forming that poison, water must stagnate.

Am I called on for an example to prove, that the mode of cultiva-

tion here recommended, can give health to the inhabitants of a sickly district? The summons is fair; and I answer it by pointing to what is called the Neck; a large body of land adjoining the city of Philadelphia, on the south. Half a century ago, that tract was but little better than a great morass. It was cultivated and inhabited only in spots. Nor did the Pontine marshes surpass it much in the extent and violence of its annual disease. It filled the Pennsylvania hospital with dropsies and other sequelæ of neglected or unskilfully treated bilious affections. But time and labour have converted it into meadows, fields, and gardens, rich in the products of the several kinds of cultivation pursued. It is grazed on, in parts, by herds of cattle, as fine as any the world exhibits. And the Philadelphia market receives from it an abundance of the choicest kinds of fruit and vegetable. Nor does it flourish more in vegetation than in health. Its population is now dense. "Every rood" of it may be almost said to "maintain its man." And instead of the pallid cheek and languid movements, which characterized their predecessors, its present inhabitants exhibit as much of the sunburnt bloom, and vigorous limb, as belongs to the healthiest of their upland neighbours.* Add to this, that instead of being poor, as formerly, they are prosperous and comfortable. Such is the happy result of draining and banking, planting and sowing. In many other parts of our country that might be mentioned, the same process has uniformly led to a similar result. Nor can it fail to do so every where, until the laws of nature change. While filth shall continue a source of disease, and cleanliness the reverse, so long may the inhabitants of any place do, what those of the Neck have already done—redeem health, and render fens and marshes more profitable than mines of gold or silver.

Another very impressive instance of the happy effects of cultivation in reclaiming a swampy and sickly district to healthfulness and prosperity, is derived from the history of Calcutta and the country around it. That city, built in a morass, on the banks of the Hoogly, was originally a speedy and almost certain grave to the Europeans who resorted to it for purposes of commerce. But a well-regulated police within, and the thorough cultivation of the environs without, have rendered it as healthy as any other city in a warm climate. The same is true of Barrackpore, Serampore, Chandernagore, and many other places in the province of Bengal. They were once sickly, but have been rendered healthy by means of cultivation. Bourdeaux furnishes another memorable example to the same effect.

* See American Intelligence for some remarks on this statement.—Ed.

When surrounded, as it once was, by marshes, it was one of the sickliest cities in France. Bilious fever prevailed in it as regularly, and almost as violently as it does in the vicinity of Rome at present. But the marshes became cultivated, and it and the country around it are healthy.

In fine then, there is not on the shores of the Chesapeake, or the banks of the Mississippi, nor on any other shores or banks in the United States, a tract of fenny land, susceptible of redemption from the water by drains and *levees*, that may no be rendered inhabitable and healthy.* But to effect this, the cultivation, as already mentioned, must be complete. Half done business, I repeat—and it can scarcely be too often repeated, is generally worse than neglect. It allures and encourages only to disappoint, and begets confidence only to betray. When the country around Edinburgh was in a half-cultivated condition, it was visited annually by intermittents and remittents, but in its present state of high cultivation, it is free from them. Of the country in the neighbourhood of London, the same is true.

Is it required of me to present a picture the reverse of that exhi-

* It is not contended that all places susceptible of draining and cultivation, can be rendered equally healthy. But they can be rendered places of comfortable abode. The lowlands of the Carolinas, and I believe also of Georgia, are much healthier now than they were at the close of the revolutionary war. The cause is obvious. They are under higher cultivation. At the period referred to, white men could not labour in them and retain their health. Negroes were therefore necessary. But they are less necessary now. In twenty or thirty years more, perhaps within a shorter period, they will not be necessary at all. White men will do their work to much more advantage. By that condition of things, the abolition of slavery in our country will be greatly facilitated Like other evils, human bondage will disappear under the progress of improvement. But, in the present case, the event, however desirable, cannot be hurried without producing a worse evil.

As relates to North Carolina, a fact has been ascertained, which proves the uncommon healthfulness of the state. By the last census it appears that the population of that commonwealth amounts to 738,470. Of this number of individuals, 304 have attained the age of 100 years and upwards. This gives a centenarian in every 2425 persons throughout the state! What will Mr. Godwin and other Europeans who deny American longevity, say to this? Will they persevere in proclaiming us a degenerate race? Can 304 centenarians be found in every 1,000,000 of the inhabitants of Great Britain and France? I do not possess facts sufficient to justify me in speaking positively on this point. But I doubt exceedingly whether the proportion of persons who attain to the age of 100 years, is half as great in either of those countries as in North Carolina. Yet that is not the healthiest state of the union.

bited in the case of the Philadelphia Neck, and the region in which Calcutta stands? I find it in the Pontine marshes. That spot was once the paradise of Italy—perhaps of the world. It was studded with resplendent villas, the summer residence of the wealth and fashion of Rome, and the chosen abode of health. Its halls were, therefore, crowded with blooming inhabitants from the city, and mirth and music resounded through its groves. May records, moreover, be credited, scarcely did its clustering roses exceed in freshness its native daughters. But, mark the contrast. It is now, as its name imports, a waste of marshes, its palaces overthrown, and replaced by the huts of a few wretched peasants, whose only refuge from poverty and sickness is an early grave. The human voice is scarcely heard in it, except to moan. Such are the pictures, past and present, of that celebrated place. And to what cause is the contrast to be ascribed? Difference in cultivation at the period referred to. When it was the abode of health, it was the abode also of industry and enterprise, which drained it of its waters, and clothed it in vegetation, and thus prevented the formation of the seeds of disease. But indolence and neglect succeeded, and their kindred train of evils followed. The waters resumed their ancient places, ornamental and protecting vegetation perished, and in its place arose aquatic plants, to turn to dissolution, and aid in the production of febrile miasm, and disease again prevailed. Similar changes have occurred in the town and settlement of Fultah, on the banks of the Hoogly, below Calcutta. In consequence of a high state of cultivation, that place, rescued from a marsh, was once as healthy as any in India. But through neglect, its original uncultivated condition has returned, and the jungle fever renders it now almost uninhabitable. A similar misfortune occurred to *la ville neuve les avignon*, which is situated on one of the branches of the Rhone. In former time, that town was celebrated alike for its healthfulness and beauty. But the embankment of the river on which it stands giving way, its environs were flooded and converted into a marsh. This event soon rendered it as remarkable for sickness as it had been previously for health.

Such, in obedience to the eternal laws of cause and effect, are the changes in salubrity, which must always accompany similar changes in the cultivation of marshy tracts of country. Industry and thorough cultivation will be rewarded with health and plenty, while the lot of neglect and defective cultivation will be sickness and poverty. Allow the Philadelphia Neck to fall back under the dominion of water, weeds, and mud, and, like the Pontine marshes, it will be again under the dominion of bilious fever; and its inhabitants will, a

second time, suffer alike from disease and indigence. It is worthy of remark, that, in redeeming a marshy district from sickness, it should be put under a covering of vegetables that require but little irrigation. For this reason the rice plant is unsuitable; and a dense mat of meadow-grass is the best. Next to this are timothy, wheat, and rye. Clover is also admissible.

The bad effects of an immature cultivation of the soil are further manifested in the succession of events that usually marks the settlement of new countries. The land being fertile is covered with a heavy growth of grass, underbush, and forest timber, which protect it from the sun. Under these circumstances no febrile malaria can be formed, because the surface of the earth, where the vegetable relics and moisture abound, is wanting in temperature. The settlers arrive, erect their cabins, and, for the first season, continue healthy. But this state of things cannot last. The earth is to be cultivated; and the cultivation must be at first immature. The axe and the mattock having removed the larger and smaller growth of timber, and the plough having furrowed the surface of the soil, the sunbeams get access to the moist vegetable mould; because as yet the crop of cultivated vegetables is not sufficiently dense to protect it. All the elements of malaria being thus brought together, the consequence is obvious. The poison is formed, and enters on its work. Hence, during the second summer and autumn of their residence in their new places of abode, the emigrants begin to suffer from the sickness called *a seasoning*. Nor does the evil immediately cease, inasmuch as the causes continue to operate, for a time, with a force but little diminished. At length, however, the condition of things changes. The cultivation of the soil being matured, its rawness and superabundant humidity disappear, and the growth of domestic vegetables becomes sufficiently close and heavy to protect the surface of the ground from the rays of the sun, and perhaps to appropriate to its own use the matter that would otherwise turn to miasm. For that matter becomes no doubt the food of the plants. The issue has been already told. The malaria of defective cultivation disappears with the state of things that produced it, and the primitive healthfulness of the country is restored. If fens or marshes exist, they are drained and converted into meadows, which more completely secures the salubrity of the place. In further illustration of the principles here maintained, it may be observed, that hurtleberry and cypress swamps, with all fens and marshes deeply shaded, never produce malaria. Why? Possibly for two reasons. They contain too much water; and the protection of their surfaces from the rays of the sun renders

them too cool for the process. Admit the sunbeams by the removal of their leafy covering, and miasm will be formed.

Mill-ponds are often a fruitful source of malaria. Can any alteration be made in the mode of forming them, calculated to lessen or prevent the evil? I think there can.

The amount of mischief done by a mill-pond, other things being alike, is in proportion to the quantity of vegetable matter, which it subjects to dissolution; and that again is usually determined by the extent of land that is flooded by the obstructed water. Two measures, therefore, present themselves for diminishing the evil; and either or both may be adopted, according to circumstances. In all cases the forest timber and underbush, covering the ground to be overflowed, may be cut down, grubbed up, and burnt, or otherwise removed, before the erection of the dam. Under this regulation much less vegetable matter will be dissolved. And in many instances, the construction of a *levee* or artificial bank, of a moderate height and extent, will confine the stagnant water within narrow limits; and thus will only a small portion of land be flooded. That these measures would prove useful, cannot be doubted. The erection of *levees* would even add to the efficiency of the establishment, by giving a better head of water, than could be had without them. Nor do I perceive that any objection to them can be reasonably urged. The expense attending them would rarely be very heavy. And if, in some cases, it should be so, what is the pecuniary interest of a few individuals, when balanced against the health and lives of thousands? That the removal of the timber and underbush from the flooded ground would be salutary, is proved by the fact, that old mill-ponds are much less deleterious than new ones. The reason is plain. From the former, vegetable matter is removed by decay. In the latter, it abounds; and while undergoing dissolution, produces malaria. To the precautions here suggested, add the planting of rows of shrubbery and trees along the *levees* or edges of mill-ponds, the benefits of which will be again referred to, and it is believed that the evils of those establishments will be greatly diminished.. They will be rendered not only innocent, but ornamental. They will resemble the willow-fringed lakes and fish-ponds of European parks, and pleasure grounds, and be no longer dreaded as laboratories of poison.

4. *When malaria is already formed, how may its effects on the human constitution be most certainly obviated? In other words, what are the means by which the inhabitants of a city, or a district of country, subject to bilious fever, may best preserve their health?*

Are these questions proposed to an honest and enlightened physician, by those who have confided to him the care of their health? He can render to them, in conscience, but one answer, "withdraw from the sickly region, during the sickly season. Nothing short of this will certainly protect you." But the few only can follow the advice. The many being destitute of the means of removal, or prevented from it by indispensable business, must abide the evil. To these, therefore, the following remarks may perhaps communicate some useful information.

It is a maxim in pathology, that during the prevalence, whether endemic, or epidemic, of a bilious fever, every inhabitant of the sickly district is predisposed to the disease. Nothing but an exciting cause is necessary to its production. Let such excitement, therefore, be strictly avoided. Am I asked what I mean by exciting causes? I reply, every thing that can produce fatigue, or any kind of exhaustion; every impression out of harmony with the system. In other and plainer words, improper exposure, intemperance, and all sorts of excess. Some of the most powerful exciting causes are, fatigue from severe or protracted exercise, or long endurance of inordinate heat, sudden and great vicissitudes in the atmosphere, especially from a higher to a lower temperature, and from dryness to moisture, unguarded exposure to a current of cool air, a shower of cold rain, the evening dews or the common humidity of the night air, more particularly if the person be exposed in a posture of rest, in which case, should he fall asleep, the evil is increased; stunning and weakening injuries from blows or falls, inordinate indulgence in love, the influence of the other passions generally, more especially the passion of fear, and the action of intense and long-continued study. To these add excess in eating, drinking, and watching, the use of crude and indigestible food at any time, but particularly just before retiring to rest, deep anxiety or dejection of mind, and the swallowing of irritating and nauseous pills and potions, as preservatives of health. Such, I say, are some of the most dangerous exciting causes, which should be studiously avoided by all who are anxious to escape disease. But these are only passive duties of prevention. There are also active ones to be performed.

If individuals escape a prevailing epidemic, next to their avoidance of exciting causes, they owe their safety to the prophylactic power inherent in their constitutions; that power denominated by the schools *vis conservatrix naturæ*, whose province is to resist the influence of deleterious agents, and preserve health. Nor is this conservative attribute, as many have pronounced it, a creation of fancy. It as

certainly belongs to the human system, as the power to breathe, to secrete bile, or to digest food. If it did not, health could not be maintained a single hour by individuals living, breathing, and swallowing in the midst of a virulent atmospherical poison. On this point I am anxious to be clearly understood. By the *vis conservatrix naturæ* I do not mean any separate and peculiar entity or principle attached to the constitution as a guardian of health. I do not identify it with the *anima medica* of Stahl. That would be a hypothesis too fanciful for the sober sense and practical views of the present age. I mean only a given and peculiar mode of action of the general powers of the system, or rather of its organs possessing power adapted to its existing exigency. As are the exigency and demand of the system for the time being, so is the mode of action. Is food to be digested? The brain and all the other leading organs combine to aid the stomach in its work. To prove this would be easy, were it admissible in me to dwell on it. If those organs are feeble or diseased, and unable to furnish aid, the work is not suitably performed, the stomach alone not being competent to it. Is matter to be secreted to produce the reünion of a broken bone? The general system must aid the part immediately affected, and especially destined to the work of secretion, or the process will fail. Hence, under the existence of constitutional disease or debility, a broken bone does not reünite; at least it does so, if at all, slowly and defectively. Does any other form of disease exist? The powers of the system must concur to remove it, or it will not be removed. Medicinal substances, unaided by those powers, cannot cure it. To enlightened physicians this is but a truism. They know that medicines are literally but the handmaids of nature. In like manner, when the system is assailed by febrile miasm, its powers must confederate to resist the poison, or disease will ensue, as certainly as ponderous bodies, when unsupported, fall to the ground, and those that are lighter than the atmosphere pass upward. And this confederacy is what I understand by the phrase *vis conservatrix naturæ.* The philosophy of all this I waive, the fact alone being sufficient for my purpose. I do not know that this explanation is necessary on the present occasion. I trust, however, it will not be deemed irrelevant or improper. My chief reason for offering it is, that, when speaking on the subject, I have been often misunderstood; and I am solicitous that this should not be the case now. On this topic I shall only add, that, were it not for the attribute of which I have spoken, no exciting cause would be requisite for the production of bilious fever. The poison alone would be competent to the effect.

Man escapes then, I say, from the influence of bilious malaria, when he does escape, in consequence of the resistance of his conservative power. And, other things being equal, the more perfect his health is, the more successful will be the resistance. This may be considered another axiom in pathology, whose applicability to the subject in question is plain, as will appear presently.

Different, and even opposite opinions are entertained, and corresponding directions given, with regard to the kind of diet and drink most suitable to individuals, as relates to their protection during the prevalence of a bilious epidemic. Some physicians advise the entire abandonment of animal food and stimulating liquors, and the substitution of vegetable aliment and water in their place. This, we are told, is to purify the blood, and render it insusceptible of the febrile poison. Others pronounce this course too debilitating, and therefore calculated to invite disease. Accordingly their directions are, to eat more animal food, accompanied by more stimulating condiments than usual, and to drink more freely of vinous and spirituous liquors, in order to escape the sickness, by "living above it."

I apprehend both sets of directions are equally wrong. Sudden and great changes of diet and drink are hazardous at all times, and under all circumstances. But they are peculiarly so during the prevalence of disease, when the constitution requires all its stability and firmness to enable it to resist the febrile miasm. But an immediate and striking change in food and drink necessarily deranges the constitution, unsettles its economy, and weakens its powers. It requires of it a new order and degree of action, to accommodate itself to its new condition. It alters, moreover, its susceptibilities. In conforming to this *new* state of things, the constitution must abandon the *old;* and, in its transition from the one to the other, it cannot fail to be temporarily enfeebled. In the mean time, the malaria, plying its powers, gains an ascendency, and disease is produced. The condition of the human system, when in this transition state, resembles that of an army engaged in action, whose battle array an unskilful commander imprudently changes in the face of an enemy, who, taking advantage of it, makes victory sure; or it may be likened to the condition of a ship in a gale. Her storm-stay-sails are set, and her helm lashed fast, and she is riding out the blast in safety. But the wind suddenly shifts, and renders another state of preparation necessary. Her present array, therefore, is broken up, that the other may be formed, and she is thrown loose, for the time, into the wind. The peril is great, and the issue often fatal. Before the new ar-

rangement can be completed, the vessel may be overwhelmed and the crew lost.

I do not think it safe for those exposed to it to make any material change in their mode of living, during the prevalence of a bilious epidemic; I mean, provided they have lived temperately. For the intemperate I have no other advice but to return to sobriety, at every hazard. Better to die in temperance, than live in debauchery. Let the temperate, I say, adhere to that mode, which they have found, by experience to be most subservient to perfect health, and that will give them the greatest security against the influence of malaria. It will impart to their preservative power the greatest degree of vigour. Have they lived on vegetable food and water, and have these articles proved most salutary to them? Let them adhere to them. Has their food been animal, and their drink fermented or distilled liquors; and have these given them the highest health they have enjoyed? It would be indiscreet to change them. Nor, under the same proviso, ought they to make any alteration in diet and drink of a middle character, more stimulating than the former, and less so than the latter. The end aimed at is entire health, and whatever kind best secures that should be steadily persevered in. This, if I mistake not, is the dictate of common sense and experience; while the directions to change, as just specified, are the offspring of hypothesis. They are predicted on the assumption, that their authors know what state of the blood gives a liability to disease, and what a security from it; whereas, in fact, they know nothing of the matter. They do not even know that any one state of the blood, independently of the condition of the solids, is preferable to another, as relates to the liability of the system to be injured by malaria. Nor have they the least knowledge how that fluid is affected by different kinds of aliment and drink. The whole is conjecture. But we do know that the more perfect the health is, the more vigorous is the resistance of the system, when assailed by any deleterious agent, and the less, of course, its liability to be injured by it. Should any slight alteration, however, in diet and drink be made, let the change be to articles that are lighter and less stimulating, rather than to those that are heavier and more so. In an especial manner, let heavy and stimulating food and drink be abstained from, during a state of exhaustion from excessive exercise, or long exposure to intense heat. In such a case, every thing taken should be cooling, light, and easy of digestion. The system calls for quietude, that it may recruit itself, not for irritation by diet and drink, to exhaust it still further and more injuriously.

Clothing and exercise, judiciously regulated, are of great value, as safeguards from disease. The former should be such as may best maintain the healthy action of the skin, and protect it against sudden vicissitudes in the atmosphere. Let flannel or muslin, therefore, more especially the former, be worn next to it in preference to linen. The action of this kind of clothing is much aided, and its beneficial effects promoted, by perfect cleanliness of the skin, and the frequent use of the flesh-brush, or by frictions with a coarse dry towel, or a roll of flannel. The feet, in particular, should be carefully guarded against cold and moisture, which is also best done by woollen or cotton. The other articles of dress ought to conform to these. The end aimed at is to keep the body in an equable and comfortable temperature. Let the warmth preserved, however, be above the *punctum jucundum*, or point of pleasant feeling, rather than below it. Woollen clothing generally, therefore, accommodated in its texture to the character of the weather, should receive a preference.

Exercise should never be turned into labour. It should not, I mean, be so violent or long-continued, as to induce fatigue. The intention of it is to invigorate and strengthen, not to exhaust and enfeeble. When it is judiciously accommodated to this end, health is confirmed by it. It should be taken daily, in the open air, when the weather is favourable, and, if practicable, without the sphere of the malaria. Walking and riding on horseback are greatly preferable to "airings" in a carriage. The latter are well named. They are *mere airings* and nothing more. They do not amount to exercise, except for invalids, who can sustain no other sort of gestation. Sitting or lolling in a carriage is, at best, but a sedentary occupation. Exercise should be taken in the cool, but not the humid portions of the day. During the heat of the day it may prove dangerous, and should, if practicable, be avoided. Nor ought it to be indulged in immediately after eating, especially after dinner. Exercise, when the stomach is loaded with food, is never salutary. Nature herself admonishes of this. Hence the drowsiness and indisposition to motion felt, soon after meals, both by man and the inferior animals. The dog lies down to sleep, and the ox to ruminate; and man, if he has leisure, retires to his *siesta.*

Does bilious or yellow fever prevail in a city? There are yet other precautions which have been found useful as means of prevention. Respecting the malaria of those complaints, two important truths are known. It does not rise to the highest stories of lofty city dwellings; at least it does not reach them in a state of full concentration, and strength; and exposure to it at night, especially during the inaction

of sleep, is much more dangerous than exposure during the day. On these two facts, valuable measures of safety may be founded.

Are individuals compelled, by business or duty, to pass the day within the sphere of the miasm? Let them, if practicable, sleep without it, at night, and they may escape mischief. Or if unable to avail themselves of this precaution, let them adopt the next best, which is to pass the night in the upper stories of their houses, above the reach of the enemy. Let them indeed spend all the time they can in those stories, and they may be safe. This is no hypothesis. The practice recommended has been successfully tried. It is founded on principle, and, if generally adopted, cannot fail to do good; although it may not, and I presume will not, protect from disease in every instance. When Europeans, in the cities of the east, retire to their domestic quarantine to escape pestilence, they confine themselves strictly to the higher floors of their houses. Their real intention in this, is to maintain a position as remote as possible from such persons, affected with plague, as may pass along the streets. Thus, in their opinion, they escape contagion. But they act wisely from mistaken motives. There is no contagion in the case. Plague is no more contagious than yellow fever. Escape is to be accounted for on a different ground. The malaria of plague does not rise to a great height in the atmosphere. Europeans, therefore, confined to the upper stories of their houses, are above the reach of it. Those who reside on the lower floors, however strictly they may seclude themselves, do not so generally retain their health.

The same miasm which produces common bilious and yellow fever, produces also cholera infantum, a complaint which prevails most in our large cities, and might there be denominated *pestis infantum*. It is known that the best and only certain means to protect infants from this disease, is to allow them to pass the summer in the country. But there are not many cases in which this is convenient. In lieu of it, therefore, if the subjects to be protected cannot be allowed to sleep in the country every night, during the summer months, which would be the second best plan of security, let them enjoy the third, which is to pass their nights in upper stories. Let them pass the day there also, except during the hours of exercise in the open air, when they ought, if possible, to be removed without the limits of the malaria. A few hours every day spent in the pure air of the country, would aid much in maintaining the vigour of their systems, and in protecting them from disease. Again, it is known to every one who has attended to the subject, that, in districts of country where bilious fever occurs as an annual endemic, other things being alike, those who sleep

in upper stories are less liable to the disease than those who pass their nights below. Nor is this all. In the places of which I am speaking the inhabitants find no inconsiderable security from the endemic; by erecting their houses on artificial mounds thrown up for the purpose. This practice is pursued in some of the sickly portions of the United States. And were the mounds made higher than they usually are, the security derived from them would be greater. True, the professed object of the inhabitants, in thus elevating their buildings, is to raise them above the common humidity of the soil, and in part above the ascent of the dew. But they aim at one end that is good, and attain another that is better. They live, and especially sleep, above the flight of malaria; and hence chiefly their safety arises. To escape from the dew, and other forms of moisture, is advantageous; but to keep out of the reach of the miasm is much more so. The former is but an exciting cause, and can do comparatively but little mischief, unless the latter has invaded the system, and produced a predisposition to disease.

There are yet other precautions which may be advantageously practised by the inhabitants of places where bilious fevers prevail. They are especially applicable to sickly situations in the country. It is hazardous to go out in the morning with the stomach empty. Regular breakfast, or some gently stimulating and cordial beverage, accompanied by a cracker or a bit of bread, should be first taken. For the purpose in view, nothing perhaps is better than a cup of coffee, chamomile tea, or some other mild aromatic bitter. In the aguish counties of England, a glass of table beer, with perhaps some bread, is the usual substitute, and is no doubt a good one. In other places cider is used, it is said with beneficial effects. But wine and distilled liquors should be avoided. They are too stimulating for the end desired, and very often lead to intemperance. One of the most injurious and offensive practices in our country, and which brings down on us deservedly the reproach of foreigners, is that of morning dram-drinking. Nor does it afford protection from malaria. Nothing we swallow can do that, unless it gives real strength primarily to the stomach, and by sympathy to the conservative power of the system. But such are not the effects of morning drams. They rouse the stomach to preternatural action for a time, only to sink it the deeper in exhaustion. It is a disquieting sense of this that leads to a repetition of them, until intemperance is the result.

Is any one inclined to ask me, would not bread and cheese with a draught of water, or a breakfast of bread and milk, protect from malaria as well as coffee, beer, or cider? To this question I am not

prepared to answer in the negative. Perhaps an affirmative reply would be nearer the truth. But the experiment alone can answer definitely. And I know of no instance where it has been decisively made. For many years before his death, the late Dr. Tilton, of Delaware, breakfasted on the product of his own ground. If I mistake not, the meal consisted chiefly of fruit, bread, and milk. Yet he enjoyed perfect health, and attained a very advanced age. On this topic I shall only add, that were our "temperance societies" to denounce excess in eating as well as in drinking, marking with equal disapprobation the use of *improper* food, and setting correct examples themselves in relation to the whole, the prospect of a thorough reform would be much brighter than it is. A very frequent cause of intemperate drinking is intemperate eating, connected with the use of indigestible aliment. And for every drunkard in our country, we have a hundred gluttons, if, by that term, we mean those who eat too much. Nine hundred and ninety-nine out of every thousand persons in the United States eat to excess, and suffer by the practice.

Like other matters floating in the atmosphere, malaria travels with the wind. It therefore does mischief, on the leeward side at a much greater distance from its source, than on the windward. Suppose it indispensable that a dwelling, fortress, or town be built near to a marsh that cannot be immediately drained and cultivated, and that the prevailing summer and autumnal wind of the place is from the south-west. Let the buildings be erected on the same side. Why? Because the wind will carry the malaria *from* them, and their inhabitants will be healthy; while it will convey it directly *to* them, if they occupy the north-east side, and they will suffer from sickness. Hence the well-known fact, that in the southern section of the United States, where the prevailing winds of summer and autumn are from the south and west, the dwellers on those sides of marshes, swamps, rivers, and mill-ponds, are often in the enjoyment of good health, while the people on the opposite sides, although further perhaps from the laboratory of the poison, are victims to fever.

Another precaution by which a town or single dwelling may be protected from the malaria of an adjacent marsh, is the interposition of a cordon of trees and underbush. If a growth of such timber, therefore, be already standing between the marsh and the buildings, let it remain; and if it be wanting, plant it. Trees of moderate elevation, with bushy tops, and which throw out limbs and foliage along their trunks, are best suited to form the barrier required. Many places in tropical climates have been rendered uninhabitable by the felling of trees and the destruction of underbush between them and

neighbouring swamps and marshes; and their salubrity has been restored by the regeneration of the timber. In the United States similar events have occurred. The evidence on the subject is therefore complete. This mode of obstructing the march, and obviating the mischief of malaria, has been practised time immemorial in Persia and other oriental nations.

Would a lofty wall arrest the progress of malaria, issuing from a neighbouring source? I doubt not it would. Facts seemingly to that effect exist. The plague of Moscow found its way in but few, if any instances, within the walls of the Kremlin. I think, but cannot, on this subject, speak confidently, that the prisoners in the Philadelphia jail remained healthy, during the prevalence of yellow fever in that city, in 1798. Yet the disease, during that season, spread in all directions around the prison, where any inhabitants remained.

The uninterrupted health of the inmates of monasteries and nunneries, enclosed by walls, during the devastations of pestilence around them, is almost proverbial. It has been ascribed to different causes; strict temperance in diet and drink; general regularity of habit; exemption from strong and irritating passions; and a life of seclusion, leading to an avoidance of contagion from the sick. That the three former of these causes acted as means of protection from disease, cannot be doubted. But that the latter did not is equally certain, inasmuch as there was no contagion in the case. Others have regarded the escape of the meek recluses from pestilence, as a special blessing from above, on account of their piety. Persuaded that Heaven always stays natural calamities by natural means, I cannot abandon the belief, that the surrounding walls, which shut *in* those devout ascetics from the world, shut *out* malaria from them, and thus contributed to their safety. That those peaceful retreats of devotion may be the more secluded, the walls enclosing them are usually lined with rows of trees, and sometimes of shrubbery. These have therefore added strength to the protecting barrier. I have no hesitation in believing, that a rampart thus composed, provided the wall be lofty enough, and the rows of trees sufficiently dense; and provided also that the entrances be kept closed, will arrest completely the progress of malaria, and afford protection to the residents within.

A knowledge of the exact distance from its source, to which malaria can travel, may aid much in the selection of secure situations for residence. But that knowledge is not know possessed by any one; nor does it seem to be attainable in the present state of science. Well-established facts seem to render it certain that, under different circumstances, the poison travels different distances. It has been

already observed that it moves further from its source with the wind than against it. And it may be added, that it travels further with a current of air, than through the calm atmosphere. Is the country lével? The poison fills a wider sphere than if it were bounded by hills. For although it can attain the summit of a hill of considerable elevation, it is weakened by the journey, and rarely does much mischief on the opposite side. The distance it can pass along water is very limited. As already mentioned, it never reaches a ship lying cable's length from the shore. This has been satisfactorily ascertained in innumerable instances. During the prevalence of yellow fever in Philadelphia, families have taken refuge in vessels, anchored in the ship-channel, not more than from two hundred and fifty to three hundred paces from the wharves, and escaped disease. I doubt whether marsh miasm has ever passed over a river the fifth part of a mile in width. Unquestionably the inhabitants along one bank of such a stream are often healthy, while those on the other are suffering from bilious fever. Of a river not more than a hundred paces wide, I have known the same to be true. Families residing immediately on the leeward brink of such a stream are often healthy during the summer and autumn, while those on the same side, but a few hundred paces distant from the water suffer from bilious fever. The reason of this is plain. The wind cannot convey the poison across the river, to the former, while it removes from them that produced on the same side, and carries it to the latter. Nor is this all. Between the margin of the stream and the families living a short distance from it, there usually exists an interval of low ground, which is itself a laboratory of febrile malaria. This is also borne by the wind from the inhabitants resident on the water's edge, and thrown on those a little remote from it. Bilious miasm is said, by some writers, to travel from one to three miles, and by others as many leagues, from its source, and produce disease. The assertion wants proof. No authentic facts can be adduced in support of it. I have never known an instance, in which malaria, even when *most abundant*, produced fever more than half a mile from its source, perhaps not so much. I say, "when most abundant;" and certainly its amount must affect materially the distance it may reach. A large volume of it must be more diffusive than a small one, for the same reason that a gallon of wine, mixed with water, will give taste and flavour to a greater quantity of that fluid than a gill. In cases where malaria is believed to travel so far, intermediate sources of it are overlooked. I have already stated, and now repeat, that wherever there exists a bed of alluvial soil, or fertile soil of any kind, there the

poison may be generated. And, in those instances, where it is supposed to travel so far, if a competent examination be made, such beds will be found between the most striking source of it, erroneously considered the only source in the case, and the extreme point to which it extends. It is exceedingly doubtful whether any wind can carry malaria a mile from its source, in a state of such concentration as to produce disease.

As relates to the means of ascertaining something of the mode and distance of the march of bilious malaria, the following facts may not, perhaps, be without value. Many years ago the late Professor WISTAR removed annually with his family to a summer residence, about half a mile, or perhaps a little more, in an eastern direction from the Schuylkill. Compared with the bed of the river, the ground he occupied was lofty. But several ravines of considerable depth ran from the edge of the stream toward his dwelling. None of them, however, reached it. Some of his neighbours, especially those between him and the river, were subject to intermitting fever. There was reason to believe, that the malaria productive of the disease came from the Schuylkill. While investigating the subject, the professor discovered that the morning fogs, which arose from the river, without reaching the summit of the heights on either side, travelled along the ravines to their termination, and then spread to given distances along the plain, in the neighbourhood of their mouths. This leading to further inquiry, his next discovery was, that the sickness which prevailed was confined almost entirely to the range of the fog. Those living without it were healthy, those within more or less diseased. Here, then, it would seem that the limits of the malaria and the fog were the same, and that the latter being visible, indicated the extent of the diffusion of the former. On the banks of the Ohio the same is said to be true. Is it not probable, then, that, as a general rule, habitual fogs from marshy ground may serve as a "cloud by day," to designate the places where human habitations may be safely erected? Let them be kept without the range of the visible exhalation, and they will be more likely to be without that of the invisible. Where it is practicable to avoid it, dwellings ought not to be erected on alluvial ground, especially modern alluvion. Such a situation may in time be rendered healthy, but not without much labour and skill, accompanied probably by no little suffering. When it is possible to avoid it, an alluvial situation should never be selected for the encampment of an army. Such a place has often produced sickness in a single night.

It was observed, in a former part of this dissertation, that, in a

district subject to bilious fever, night exposure is particularly hazardous. Is it equally so at all times of the night? I apprehend it is not. It is most dangerous during the descent of the dew; an event which occurs twice in the night; once soon after sunset, and again a little before daybreak. The hours at which this meteor falls, in different latitudes, and under different temperatures, are not the same. Observation alone can ascertain them, and enable those concerned to regulate their movements accordingly. Their safety consists in avoiding exposure during the fall of the dew. If their duty, therefore, calls them out at night, let them select the period between the times of the descent of that meteor. Another precaution of great moment is, to continue in action while in the humid atmosphere. Exposure at night, in a state of quietude, more especially in a sitting or lying posture, is full of peril, and should be strictly avoided. To fall asleep during the time is still worse.

Is any one wind more deleterious than another? I mean, is it more heavily charged with pestilential miasm? No; not in the abstract, and generally. If it is so, in any particular case, it is attributable to local causes. Much error, not to call it superstition, prevails on this subject, both in the minds of living physicians, and the writings of dead ones. The medical and poetic writers of Greece and Rome have said so much about the *humidus* and *pestifer auster*, that it almost makes a part of our professional creed, that the south wind is necessarily *moist* and *pestilential.* But nothing can be more destitute of truth. The sirocco, which blights and kills from a lack of moisture, but has no pestilential taint in it, comes as frequently from the south as from any other quarter. And, in many places, the south wind is peculiarly salubrious. Instead of being always, moreover, surcharged with humidity, it often beats back the haze and vapours that come from the north, and renders the atmosphere dry and serene. In Greece and Italy the south wind is humid, because it comes directly from the Mediterranean, bearing along with it much of the exhalation from that sea. It blows, moreover, during the hottest weather, when bilious and pestilential fevers most frequently prevail. Hence its supposed connexion with those complaints. But it is not the south wind, it is the high temperature of the atmosphere, that contributes to produce the febrile miasm. Let hot air stream in from any other quarter, as it does from the north, in the southern hemisphere, and the issue will be the same. Malaria will be produced. Wind derives its character, not from the point of the compass from which it comes, but from the nature and condition of the surface over which it passes. Is that surface moist? So is the wind. Is it dry? The wind an-

swers to it. Hot? The wind is also hot. Cold? Again the wind corresponds. And it carries malaria along with it, and may be therefore called pestilential, for a short distance after passing over a sickly morass. Such is the true philosophy of that meteor. On the Atlantic borders, in the United States, all winds from north-east to south-west, taking east in the semicircle, are humid; and all in the opposite semicircle, from south-west to north-east are dry. The reason of this is obvious. The former come from the ocean, saturated with exhalation; and the latter arrive from the interior of the continent, exhausted of their humidity by a long journey over land.

Dr. Lind speaks of a certain effect of the east wind on the eastern coast of England, in terms which prove him to have been more of a mere observer than of a philosopher. He says that this wind "raises a copious vapour from water, mud, and all marshy or damp places." And he insists that it does positively "raise" the vapour, and does not produce it in any other way; and that hence, that wind is peculiarly deleterious. An error grosser than this can scarcely be imagined. It is the counterpart of the belief, that the moisture which, in a hot day, settles on the outside of a bottle or pitcher, filled with cold water, has passed through the pores of the vessel, in the character of sweat. Hence, by the uninformed, it is believed that the vessel actually does sweat. The east wind does not "raise" vapours in the part of England referred to; it only renders visible those that are already raised. Comihg immediately from the sea, it is cool and humid; and therefore robs the ascending exhalations of a portion of their caloric. The necessary effect of this is, to condense them immediately, and render them visible. On the west coast of England the east wind acts differently. By passing over the island it has lost a portion of its humidity, and received in return a portion of caloric. It is not therefore a condenser of exhalation arising from water, and does not reduce it to a visible form. On that coast, the west wind being more humid, is better fitted to produce a vapour. It is on the same principle, I say, that a bottle filled with any cold liquid, takes from the warm air in contact with it, a portion of its matter of heat, condenses the humidity it contains in a state of vapour, and renders it visible in the form of water.

Is there any particular period of the moon's revolution around the earth, at which bilious fever more usually makes its attack, than at others? Yes; at the times of her full and change. This is neither "hypothesis," nor "vision," although both terms have been affixed to it. It is a fact, as satisfactorily ascertained by observation, as any other connected with the complaint. The history of epidemic dis-

eases, when circumstantially given, proves that attacks and deaths occur most numerously at the periods referred to. Some of the most distinguished members of our profession have recorded their observations to that effect. Were my own testimony of any weight, I would say that it fully concurs with that of others, who advocate the doctrine of lunar influence. Nor is the reason of this concealed. The vicissitudes in the sensible qualities of the atmosphere, which are greatest and most frequent about the times of the full and change of the moon, act as the exciting causes of the complaint, in those who are already predisposed to it. Am I asked for the names of any of the writers to whom I have referred as high authority on this subject? I answer the demand by mentioning DIEMERBROCK, MEADE, BALFOUR, MOSELY, and RUSH; and I could add twice as many more, were it necessary. The prophylactic precept founded on this doctrine is plain, and not without its value. During the prevalence of an epidemic fever, let those who reside within the sphere of the malaria be especially cautious of exposure to the weather, about the periods of the full and change of the moon.*

Are there any medicinal substances calculated to obviate the effects of malaria? I know of none. All nostrums administered for that purpose, are but the fruits of empiricism. Some physicians speak with confidence of the beneficial effects of repeated purgatives in protecting the system from bilious fever. I consider the opinion

* There is not, in the science of meteorology, a single fact that rests on a broader or more solid foundation, than that a great majority of the most sudden and striking changes which occur in the atmosphere, from heat to cold, and from moisture to dryness, and the reverse, and an equal majority of tornados, tempests, and other violent atmospherical commotions occur about the periods of the full and change of the moon. This truth is supported alike by the records of the past, extending even to ancient times, and events that are constantly presenting themselves to our observation. That such vicissitudes in the atmosphere are uniformly prejudicial to the health of valetudinarians, is another fact which will not be controverted. But, during the prevalence of a bilious epidemic, every one exposed to the poison of it is so far valetudinary, as to be more than usually liable to disease. Exposure and unfriendly impressions of every kind, which would be innocent, at other times, produce sickness now. Such impressions are necessarily made by great and sudden changes in the sensible qualities of the atmosphere. It is on this ground that the atmospherical vicissitudes, occurring about the times of the full and change of the moon, act as exciting causes, and aid in producing new cases of the disease. Of all other epidemics the same is true, for the same reason. Hence, during the prevalence of every complaint of the kind, the same periods of the moon are most productive of fresh attacks.

unfounded, and the practice it recommends hazardous, not to say injurious. They are the growth of hypothesis. Sound science does not countenance them; and they derive no support from experience. Repeated purging, like the excess of any other evacuation, deranges the system, and enfeebles its conservative power. Instead of resisting, this invites disease. The alvine evacuations should be kept as nearly as possible in their state of habital regularity. Change would be much more likely to prove injurious than useful. Medicinal substances are intended and suited, as their name imports, to restore health, when lost, not to sustain it when possessed. Let them be reserved therefore for actual indisposition, and then administered without loss of time, and with the skill and vigour required. Does constipation of the bowels occur? It threatens disease, if it is not the commencement of it, and should be promptly removed. But actual and continued diarrhœa, the result of the repeated administration of purgatives, is not the best substitute for it. Too much purging is as bad as too little Let both be avoided. *Ibis tutissimus medio*, is here the precept of experience and wisdom. In fine, I say of the functions generally of the alimentary canal and the organs connected with it, as I did of diet and drink; let them be maintained in the condition that has been found most favourable to health and strength. As far as they are concerned, this will afford the best protection from disease.

The use of bitters, Peruvian bark, and sundry other articles denominated tonics, has been recommended as a security against a prevailing bilious epidemic. This advice does not rest on any sound principle of hygiene, with which I am acquainted; nor, as far as I am informed, does experience testify to the success of the practice it enjoins. I cannot therefore confide in its efficacy. By inducing an unnatural state of things, I apprehend it would be ultimately injurious.

A degree of cutaneous excitement somewhat preternatural, but not so high as to amount to disease, would seem to promise some security from bilious complaints. Children affected with prickly heat escape cholera infantum, unless from a sudden change in the atmosphere, or some other cause, the eruption disappear. The same is true of adults as relates to dysentery and bilious fever. Individuals who labour under elephantiasis are exempt from the fevers of hot climates; and the same is often the case with those who are troubled with cutaneous ulcers. Lazars of this description rarely suffer from oriental plague. Such, I say, are the facts; and the philosophy of the cases must be sufficiently familiar to every physiologist.

What then would be the effect of preternatural excitement of the

skin produced intentionally, as a means of prevention, during the prevalence of an epidemic fever? of one or two issues, or small perpetual blisters, for example; or of the irritation produced by tartarized antimony? These expedients I have never tried to such an extent as to enable me to speak of them from personal observation. But some of them are recommended on high authority. I shall only add, that they tend to the maintenance of centrifugal action, which is well calculated to prevent disease. Under proper regulation, therefore, they may possibly be found worthy of more attention than they have heretofore received.

It was my intention to have expressed my opinion, with the grounds of it, on the subjects of the two following questions, which are remotely connected with some of those discussed in this Dissertation.

1. Does the same malaria produce typhus and common bilious fever?

2. Is the malaria productive of yellow fever the same with that which gives rise to intermittents and remittents; or is it a different form of miasm prepared from the same elements?

In each case my present views would induce me to give a negative answer. I consider the malaria of typhus different from that of bilious fever, in both its nature and origin; nor, although formed from the same materials, do I believe the miasms of yellow and intermitting fevers to be identical. But as the consideration of these points is not essential to the solution of the questions proposed by the Faculty of Maryland; and as I have already trespassed on the limits I had prescribed to myself in this inquiry, as well, I fear, as on the indulgence of the Faculty, I decline further discussion, and close my Dissertation.

ART. II. *Cases of Pulmonary Consumption, with Observations.* By THOMAS HENDERSON, M. D. Professor of the Theory and Practice of Medicine in the Columbian College, D. C.

CASE I.—The subject of this case is a young lady, whose mother died of pulmonary consumption. The patient is sixteen years of age. It has been observed that consumption preys not "on the thorns and brambles of this wilderness, but on the rose and passion-flower of human excellence and gentleness." This was exemplified in the case of this lady. Apprehensive from her fragile delicacy of constitution that she would have phthisis, and attracted by her meek

gentle disposition, and by her personal loveliness, her friends watched over her with a tenderness that sheltered her from every impression which could hazard either emotion of mind, or irritation of body. She was nurtured with all the vigilance and care required by the loveliest and most tender flower. Pulmonary irritation, notwithstanding, became evident, and this but redoubled the sedulous attention of her friends. She kept her room, avoided exertion, had a long course of medical treatment. In her case there was no amelioration, it proceeded steadily to a fatal termination.

Case II.—Miss ——, sister of the lady whose case has just been given, was for many years threatened with consumption. She had a very flat chest, cough, expectoration, great debility, pain in the side and breast, amenorrhœa, fluor albus. She became much emaciated, and all who knew her were assured that the hereditary family disease would soon terminate her existence. Nothing that affectionate solicitude could secure was withheld. I attended her for a long time, endeavouring while I guarded against inflammatory action in the lungs, to prevent the increase of debility. Particular attention was given to avoid active exercise, or exposure to cold. Her health did not improve. Being sincerely pious, and desirous to practise what she professed, she insisted on attending evening prayer meetings, and on uniting with other institutions for benevolent purposes. These involved a change in her habits, *against which I remonstrated*, and in which she was opposed by her friends. She, however, gradually adopted her own course; took no medicine; went out at night, and exerted herself far beyond what was thought discreet. She improved in health; her mind became more cheerful; it was obvious that the change of habits had no unfavourable influence. The pulmonary symptoms declined. She married soon after, has children, and now enjoys good health, with every prospect of long life.

Case III.—Mr. —— is the brother of the cases just related. He inherited a feeble, delicate frame, with striking resemblance to his mother, who died of phthisis. At eighteen, he had cough and pulmonary symptoms; but he entirely disregarded the monitions of hereditary predisposition, the actual symptoms of breast complaint, as well as what might be anticipated from a very narrow chest, tall and slender frame. He was engaged in laborious duties in a dry-goods store; afterwards pursued a life of much more active exercise and exposure to all weather. He went two voyages to sea, and since follows mercantile business that requires bodily and mental activity.

He preserved a good state of health for more than ten years. Of late he has had one attack of hæmoptysis; but except for the time has not confined himself, and is recovering well from it.

Case IV.—Miss ——, aged twenty, came under my care with many symptoms of tuberculous consumption, which disease had proved fatal to several members of her mother's family. My patient has hard cough, slight pain in the chest, expectoration of tough ash-coloured mucus, great debility, pain in the loins, and there was an irritable, frequent pulse. I was exceedingly apprehensive of the result, and treated her case circumspectly in the way usually pursued by the best practitioners. She took digitalis, cicuta; was moderately bled, was blistered, and all this without benefit. Seeing that no relief was afforded by medicine, and that the prescribed cautions as to exposure and exertion denied her many of those enjoyments that a fine mind and cheerful spirit derived from social intercourse in visiting her friends, she gradually ceased consulting me, adopted her usual habits, and lost no health by giving up medicine. She travelled, married some time after, is the mother of several children, has pursued a very active life, and has no reason to apprehend a return of her symptoms.

The four persons whose cases have been detailed, were near relations. The first case submitted most rigidly to what was medically advised; she was closely housed, took much medicine, and yet the symptoms were not palliated, nor the fatal result procrastinated. In the other instances, strong predisposition to consumption; nay, actual symptoms were averted and removed by a course utterly at variance with what the physician advised. I do not mean to say that the same course would have removed the disease in the first case, for there are too many cases inevitably mortal. It is sufficient that the result of the three favourable cases be borne in mind, in reading the observations at the close of this paper.

Case V.—Doctor B——, while a student of medicine, attracted my attention. His family has been severely visited with tuberculous phthisis. Within a year two brothers and one sister died of it. He had pulmonary symptoms, pain in the breast, cough; once spit blood, and his friends deeply feared that he would fall a victim to consumption. His brothers and sister were attended carefully by an eminent physician, who pursued the routine thought best for such cases; he adapted that routine with great intelligence to the several cases. I was consulted in two of the cases; no benefit resulted from medical treatment. Doctor B. was so situated as to be compelled to walk

two miles every day to attend the medical lectures, and to return the same distance at evening. This he did with unvarying regularity, through all kinds of weather, and frequently remained in the dissecting room till late at night. Such was his ardour for the acquisition of medical knowledge, that though with the above symptoms and much debility, he exposed himself to weather cold and wet, and to fatigue that others shunned. Occasionally the pain in the chest and debility were alarming—but he took no notice of them, and continued habits that *I urged him to avoid*. He, thus predisposed, continued these habits for three winters, and now lives in finer health than he has ever enjoyed. His relations who died, carefully shunned exposure and exertion.

Case VI.—Some years since I was called to see a gentleman, about twenty-two years of age. His father died of tracheal and tuberculous phthisis, and my patient had for some time laboured under cough, purulent expectoration, hoarseness, pain in the breast. He had fever, with partial night sweats. I could not doubt, from his symptoms and the attendant emaciation, that his disease was confirmed strumous consumption, and that it would soon terminate fatally. I prescribed various remedies, anti-hectics, mild tonics, bleeding twice for the pain, mucilaginous mixtures for the cough, blisters, &c. As the autumn approached, I endeavoured to impress on his mind my views of what should be his winter arrangements; and these views were founded on flannel and the fireside; particularly that he should avoid exposure to cold and, wet weather. He promised obedience to my advice as to the use of medicine and exposure during the cold season. I paid great attention to his case and symptoms, but the treatment did him no good. As his duties required exposure, he finally became impatient; went out as I thought at great hazard; abandoned the use of medicine, and as he rapidly lost flesh, it seemed almost certain that he would not live long. I discontinued my visits, as he took nothing, and was imprudent. He would walk miles in the coldest weather without a surtout, and without flannel. He never avoided wet walking, or exposure to rain or snow. He took what diet was most agreeable to him; and now, after four years continuation of these habits, he is in much better health. The pulmonary symptoms are comparatively slight, and he apprehends no bad consequences from them.

Case VII.—About two years since, at the close of winter, I was consulted by a gentleman who had pulmonary symptoms. He had

cough, expectoration, pain in his breast, lost his flesh, his constitution was delicate, his frame slender, and his chest narrow and stooping. I blistered him, gave him cough mixtures, and confined him to his room until the weather became mild. As he did not recover, I advised him to go by sea to New York, to reside in the country, to take exercise freely, and to avoid medicine, unless it became obviously necessary. I had the pleasure to see my patient some time after with his symptoms entirely removed. Medicine had no agency in his recovery.

Case VIII.—Mr. ——, ætat. fourteen, lost his mother with tuberculous phthisis. It deserves remark here, that his mother was one of a family of nine, every member of which family died of this phthisis. This youth was growing up with every appearance of the scrofulous aspect; strong symptoms of pulmonary disease came on; as cough, thoracic pain, and I am informed that he once had hæmoptysis. He was advised to adopt the life of a sailor, the laborious duties of a common sailor. He went out before the mast; and after having been two years at sea, seems to have a renovated constitution, and is free from the pulmonary symptoms that threatened his life.

Case IX.—Mr. J—— lost his mother with tuberculous consumption. Seven years ago he had measles, which, as they declined, developed pulmonary symptoms, cough, pain in the chest, expectoration of tough dark mucus. Ever since he has suffered with obvious symptoms of tuberculous consumption; during the winter they are distressing.

He has taken no medicine, is bled when the lungs seem to be irritated, and when they occasion pain—and he has derived great benefit from issues. But he has pursued a regular plan of out-door exercise on horseback and in walking, in winter and in summer. He is now better than when first taken. He attends the medical lectures; dissects at late hours, and is confident that his habits have baffled the threatened inroads of a most formidable disease. He does not lose blood habitually—only when obvious local plethora demands it.

I have been induced to review my experience in the treatment of phthisis pulmonalis, by reading two papers by Dr. Parrish, in the North American Medical and Surgical Journal. I could have adduced several other instances, but the above cases appear to me sufficient to justify some very interesting practical reflexions. These may be submitted in the form of queries.

1. What has been the result in those cases of tuberculous phthises

which have been subjected to deliberate and judicious medical treatment, *unconnected with free exercise in the open air at all seasons?*

The answer is, that my long and extensive experience does not afford one case of recovery.

2. Has the medical treatment, *without active exercise,* materially protracted life in any cases?

The answer is, that it is very doubtful whether one life has been materially protracted.

3. Have bleeding, digitalis, mercury, prussic acid, tartar emetic, confinement to stove rooms, blistering, emetics, cicuta, ipecacuanha, inhalations, liverwort, have any of these, *without active exercise,* arrested, averted, or cured one case?

Confining this answer to tuberculous phthisis and to my own experience, the answer is in the negative.

4. Has any one case been averted, arrested, or cured, the successful result in which has not been owing to exercise, exertion, to free exposure to weather at all seasons, in walking, riding, and sailing?

The answer is, that this course of habits seems to have been the only preventive or curative agent.

5. And yet another question recurs, viz. in reviewing my practice. is there not reason to believe that many remedies so much relied on, and so authoritatively commended, have been either positively or negatively injurious, if not both?

The answer to this question may be inferred from what follows. The subject should be cautiously investigated, but requires most serious consideration.

If the opinions and experience of Dr. Parrish and others, and if the cases just detailed prove any thing, they demonstrate this, that many cases of phthisis that were in progress of medical treatment, and were doing badly; on discontinuing the medicine, and in relying on active exercise and plain nutritious diet, did well. It would appear that a continuation of medical treatment in other cases did no good; the disease terminating certainly, and often speedily in death. This was probably owing to the intractable nature of the disease preying on constitutions unable to withstand its ravages. We should, however, inquire and reflect seriously, whether remedies, such as are used in consumption, if they be not beneficial, be not injurious. It is not probable that bleeding, mercury, digitalis, prussic acid, &c. will be negative in such a disease, and in such constitutions as the phthisical have. So uniform is their failure to cure, and so frequently are they injurious, that the routine of prescription is formal at best, and hazardous in many instances. This formality. this routinism,

is the bane of improvement in our science; and Dr. Parrish deserves the thanks of the profession for the firmness and intelligence with which he has assailed it.

If it excite surprise when I say that not one recovery from phthisis has occurred in my experience, let it be observed that allusion is made to *tuberculous* consumption. Chronic bronchitis, catarrhal phthisis, and that from ordinary suppuration or abscess in the lungs are not in view. I have often seen recoveries in these cases, and have reasonably ascribed the recovery to medical treatment. Not so with tubercular phthisis. In this fell disease, if a remedy there be, it is yet to be discovered; and he is a wise practitioner who avoids the lædentia in scrofulous consumption. This form of phthisis is equally fatal wherever it exists; and where is it not? If in the admission that the remedies used may have been positively injurious, there appear too much candour, it is replied, I have followed the best lights that have been supposed to gleam along the dark path of tuberculous phthisis.

Experience has long since taught me that the writings of Dr. RUSH on pulmonary consumption are not so much to be relied on as his precepts and practice in many other cases. The peculiar action of tubercular disease in the lungs, arising as it does from strumous complication, sets at nought the simplifications of ingenious hypothesis, and much more the boldness of systematic practice. Consumption consists in something more than the action of chronic pneumony, and invariably baffles the depletory measures directed to reduce that action. The origin, increase, and softening of tubercles, involve more in practical consideration, than the mere question whether or not they are the result of inflammation. It is in the incipient stage of tuberculous phthisis that the practice of Rush is to be deprecated. It is to this incipient stage that the plan revived by Dr. Parrish is applicable, though not a few cases are on record in which the plan was advantageously pursued in more advanced stages. One of my patients appeared to be in confirmed consumption, and yet has been apparently preserved by this hardening system.

There is one thing to be considered in the treatment of consumption, and it is very important. Take a patient threatened with this disease, or with it formed; confine him to his room; deny him active exertion; bleed him frequently; put him on low diet; prevent unreserved intercourse with his friends; give him mercury, digitalis, cicuta, hydrocyanic acid, and you surround him with a gloom that has most positive influence on his nervous system. Nervous depression and irritation derange, irritate, enfeeble vascular action, especially in the

capillaries, and here is a superadded and exceedingly operative difficulty. It is vain to talk to patients about exercise with dumb bells, &c. in stove rooms. Patients lose their energy by the confinement, and many lose entirely their elasticity and hope, in the fear that this course of practice and seclusion arises from the belief that consumption is formed, and therefore incurable. In all chronic cases, mental energy and cheerfulness are conspicuously subsidiary in treatment; without them our mercury, and foxglove, and bleeding, do harm rather than good. This system then of confinement so impairs nervous energy as to act unpropitiously on the bodily powers, on the capillary circulation in the abdomen, on the skin, and above all, in the lungs themselves, favouring obstructions and sluggish circulation there. I have heard a delicate female say, with great firmness, "if I have to live but two years, let me rather enjoy myself than be immured;" and pursuing her own course, she lives and does well.

How different are the effects of accustomed exercise and habits on the nervous system, and by consequence, on general functional action. How exercise tends to equalize and invigorate capillary circulation, and thus to prevent local obstruction, and if used with judgment, to remove it when formed. Exposure to cold, is supposed, in phthisical and other cases, to act unfavourably in two ways; on the skin generally by constricting it, exciting sympathetically the *irritatio introversa;* and secondly, by direct impression on the air-cells of the lungs. The first mode of operation can be easily guarded against, by carefully adapting dress; while the injury from direct contact of air has always appeared to me to be hypothetical. Doubtless if a person habituated to stove rooms too suddenly inhales a cold atmosphere, it may be prejudicial; but this sudden change is not here considered or desired.

An objection to exercise is by some said to be, that it so hurries the circulation of blood through the lungs as to be prejudicial in tuberculous phthisis. Of this I have strong doubt. Too great exertion may do so; but this is not what we wish the patient to make. On the contrary, moderate exercise regularly pursued on horseback or in a carriage, has to my knowledge reduced an irritable and frequent pulse in disease of the heart, to moderate and healthy action. I am sure that so far as exercise favours capillary circulation, it accomplishes an important object in the incipient, or even in the more advanced stages of phthisis.

It has been observed by Dr. Parrish, that the practice sanctioned by his cases and by mine is not new. It is a practice which should be judiciously attempted and fairly tried by cautious perseverance. Let

the patient keep the feet dry and warm; let him be so well clothed as to prevent sensations of chilliness; let him avoid those severities of weather that a man in health would shun; but after this let him take exercise in the open air, at first in the mode of gestation, then on horseback, and finally by walking. In winter let him go to a climate where there will be the least interruption to his active habits. In this case physic may be needed to remove painful incidental symptoms, and what this physic should be will be obvious. It may be that these habits, and the courses of remedies usually adopted, have been too much separated under the idea of their incompatibility.

In coming to the conclusions apparently justified by the above experience and reflexions, and sanctioned by the excellent judgment of Dr. Parrish, I have had much to contend with. A physician should cautiously abandon practice sanctioned by authority, and should circumspectly enter on the field of experiment. Early education led me to rely much on medicine in phthisis. Facts, however, within my own experience, too numerous to be resisted, and too plain to be mistaken, have caused me much anxious consideration. These facts are submitted, as they may be useful. If duly estimated I think they will not be considered as overrated. We know much of the *pathology* of tuberculous phthisis, perhaps as much as we can expect to know. Bayle, Portal, Young, Reid, Duncan, Southey, Rush, with many others, have illustrated every point in the range of consumption, *except the cure*. I have seen too many fatal cases, fatal after every effort that authority or reason sanctioned, to believe that we know any remedy that promises the least hope to the sufferer. What then shall the physician do who has thus been baffled in hundreds of cases? Let him listen to the candid intelligence and experienced judgment of Dr. Parrish: let him test the practice, and confirm or confute the suggestion.

Hippocrates sent his patients on foot to the walls of Megara—Sydenham sent one on a long journey to see a Dr. Robinson. In rhetorical figure and in laudable hope, the physician has said, that in the wilds of the unexplored west, at the base of the Rocky Mountains, the plant may grow, the flower may bloom, the root may penetrate, that possesses the healing power over tuberculous consumption. If the views to be inferred from these imperfect remarks be correct, we may send our phthisical patients in pursuit of the expected blessing.

Washington, D. C. May, 1831.

Art. III. *Account of a Double Female Fœtus.* By W. E. Horner, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania. [With a plate.]

An eminent practitioner in an adjoining state was called within a few months to assist Mrs. ——, in labour with her third child. At 4 o'clock, P. M. before his arrival, the membranes had ruptured. He found a head presentation, with the ordinary phenomena of labour, and the pains severe and frequent. At 7 o'clock the head of the child protruded through the vagina and continued in that state till 9 o'clock in the evening, at which period the mother was safely delivered of a dead female child, the subject of this communication. This infant having been brought to me for examination, the following is the result of the dissection.

External configuration.—The infant of ordinary size, having two heads and necks, one trunk, two upper and two lower extremities. The transverse diameter of the trunk was greater than usual. The head and neck which had presented first were tumid and highly injected with red blood, the latter having formed an extensive ecchymosis under the whole scalp between it and the pericranium: whereas the other fœtus was pallid.

Skeleton.—Two distinct lines of spinous processes of the vertebræ could be traced under the skin from the heads down to the pelvis, and which upon further examination, by removing the soft parts were found to arise from two spines, perfectly distinct from one another, excepting the lumbar vertebræ which adhered laterally by their transverse processes, and the ossa sacra, which were fused together like two sacra fixed edge to edge. The lower end of this double sacrum was bifid, and each fork had its own os coccygis. Each spine had its own distinct spinal marrow.

There was but one sternum, which was broader than usual, and exhibited by the double points of ossification, a disposition to form a double bone.

Allowance made for this state of the sternum and of the spines, there existed a total deficiency of the left side of the right skeleton and of the right side of the left skeleton, excepting the beginnings of the ribs on these defective sides. These ribs were distinct in both fœtuses, being joined by ligament to their congeners, so that the skeletons were united also by that arrangement, as well as by the adhesion of the lumbar vertebræ and of the sacra. The general mechanism of these fœtuses, resembled what would arise from cutting away the left side of one skeleton from the left shoulder to the sa-

crum, and by cutting away the right side of another skeleton in the same relative line, and then uniting the two skeletons by the symphysis pubis—by a fusion of the sterna at their contiguous edges—by a fusion of the contiguous edges of the two sacra, and a ligamentous adhesion of the contiguous stumps of ribs.

Internal organization.—The anatomy of the necks was very anomalous, adhering as they did laterally at their roots; we found the right sterno-hyoid muscle of the left fœtus, and the left sterno-hyoid muscle of the right fœtus, united together at their inferior ends, and forming a transverse muscle, (with a slight convexity downward,) running from one os hyoides to the other. The heart was placed in the neck, fairly above the sternum, and resting upon the upper end of the latter.

The heart, though but one body, evidently arose from the coalition of two hearts, one for each fœtus. For instance, on its right side was a right auricle belonging to the right fœtus, and to the left of this was a ventricle, from whose summit proceeded an aorta and a pulmonary artery for the right fœtus.

On the posterior side of the heart existed a middle auricle—the left internal jugular vein of the right subject, and the right internal jugular vein of the left subject, united into a common trunk, which discharged into this middle auricle. The latter was found to communicate with the right auricle aforesaid.

The left auricle of the left fœtus communicated by a round hole with the right auricle of the right fœtus; it also communicated by a hole above the former, with the middle auricle. The same left auricle had also an ostium venosum communicating with its left ventricle; from which left ventricle proceed the aorta of the left fœtus.

In front of the middle auricle was a middle ventricle, which sent off the pulmonary artery of the left fœtus, and also communicated with the middle auricle, and by a lateral opening with the ventricle of the right fœtus.

The summary of this arrangement is, that the three auricles communicated with each other, and the middle auricle communicated with the three ventricles, so that notwithstanding the complexity of the arrangement, the circulation was kept up. The middle ventricle we infer corresponded with the right ventricle of the left subject, inasmuch as it sent off the pulmonary artery of the left subject.

The thorax had three cavities—one for the right fœtus, a second belonging to the left fœtus, and a third cavity, behind and below the heart, belonging equally to the two fœtuses. There was consequently a right lung and a left lung as usual, and a third lung in the third ca-

vity, which lung had five lobes, and arose therefore evidently from the coalition of the two adjacent lungs of the different fœtuses. The thorax was separated from the abdomen by a diaphragm.

The cavity of the abdomen was single, but a disposition to duplicity was manifested in several of its organs.

The liver being one body, was convex on its upper side, and looked like a single liver, but on its under surface, the blending of two livers was perceptible in the increased number of its lobes, and also by there being on its middle a double gall-bladder, with a common duct from it, which duct terminated in two orifices, one for each duodenum.

There were two stomachs, one on the right and the other on the left, having their pyloric orifices pointed to each other. There were also two intestinal canals, for from each stomach proceeded a line of small intestine which was continued through the duodenum, jejunum, and the upper half of the ileum. These two lines adhered laterally to each other like a double-barrel gun, the adhesion beginning at the upper end of the duodenum, and continuing to the lower end of the jejunum; the two intestinal tubes then separated, and continued so one-half way down the ilea—afterwards they adhered laterally for two or three inches, and then blended into a single tube which terminated in the colon, in the right iliac region. From the single tube of the ileum, a short diverticulum arose, so as to exhibit again an effort at a double canal.

The colon was single, was properly formed, and exhibited a peculiarity only in being much longer than usual, perhaps twice the natural length.

There were two pancreases, and but one spleen, which adhered to the larger end of the left stomach.

There were two kidneys and they were unusually large, one being for the right fœtus and the other for the left; they had their corresponding capsulæ renales, and betwen the two latter existed a third.

There were two abdominal aortas, one for each fœtus, and which descended between the kidneys and between the two spines. These aortas became a common trunk above the pelvis; this trunk divided almost immediately into two branches, of which the left was by much the most considerable. The right branch being small, went only to the right side of the pelvis and the corresponding lower extremity, while the left branch, besides supplying the corresponding side of the pelvis, and lower extremity, was continued in a large trunk as the umbilical artery. This umbilical artery was the only one belonging to the umbilical cord.

There was but one urinary bladder.

The organs of generation were single, and exhibited no disposition to duplicity.

A plate of the skeleton of this fœtus will be found in company with this description. A minute reference to it would be perhaps useless, as the eye perceives at once its peculiarities.

Philadelphia, April, 1831.

Art. IV. *Case of a Tumour in the Neck, with an account of the Operation for its Removal.* By George Hayward, M. D. one of the Surgeons of the Massachusetts General Hospital.

THE following case may perhaps be thought worthy of publication. It owes its chief interest to the obscurity in which the character of the disease was involved; but as the event proved that a correct diagnosis was formed, by giving the details of the case, others may possibly be aided in arriving at correct conclusions under similar circumstances.

A healthy, married woman, twenty-three years of age, came to the Massachusetts General Hospital, June 4th, 1830, on account of a tumour in the neck. She resided in the state of Maine, more than two hundred miles from Boston. She was the mother of one child, which was eight months old, and which was weaned at the time she left home. The tumour was situated in the right side of the neck, and was first discovered by her about four weeks since. It was examined by several physicians in her vicinity who pronounced it to be an aneurism, and advised her to go to Boston, and have an operation performed. The tumour, when first perceived, she thinks was nearly as large as at the time of her admission at the hospital; it was about the size of a hen's egg.

It was situated on the right side of the neck, along the inner edge of the sterno-mastoid muscle, partly covered by that muscle; but the portion next to the trachea had no other covering than the common integuments. A part dipped down under the clavicle and was covered by that bone.

There certainly were some reasons for thinking it an aneurism, either of the common carotid or of the arteria innominata. Its situation favoured this opinion, especially when taken in connexion with its sudden appearance, and its great size when first noticed. It pul-

sated also so strongly that its pulsations could be seen across the room. When examined by the stethoscope, it gave that peculiar rough sound which is known to characterize aneurisms. But it should be observed, that this sound was not perceived unless the instrument was applied in one particular direction, that is, from without inwards, so as to bring the tumour on to the carotid artery. It had also the general appearance of an aneurism; so much so in fact, that at the time of her admission into the hospital, it was not even suspected that it could be any thing else.

But after several examinations, a different opinion was formed. It was found that the tumour was not compressible; no degree of force that it was thought prudent to apply to it diminished its size in the least. It was moveable under the skin, and rose and fell in the act of deglutition. The patient was not affected with dizziness, vertigo, or any other affections of the head, which are usually, if not always the attendants of carotid aneurism. With regard to its pulsations too, these were not perceived when it was raised up from the carotid artery.

Dr. Warren, who repeatedly examined it, came to the conclusion, that it was a tumour, not of an aneurismal character, and that its removal should be attempted. In both these opinions I fully concurred; the patient suffered very much from dyspnœa, and found great difficulty in swallowing any thing but liquids, and was anxious to be rid of it, if it could be accomplished without putting her life at hazard. It was therefore determined to undertake the operation, which was performed on the 16th of June, in the following manner:—

An incision about two and a half inches in length was made directly over the tumour, along the inner edge of the sterno-mastoid muscle. I then cautiously dissected through the outer coverings of the tumour, till a considerable portion of it was laid bare. In this state a better opinion could be formed of its true character. It was therefore examined at this stage of the operation with the utmost care, and the result of the examination went to confirm the opinion we had previously adopted. A needle with a strong ligature was passed through a part of the tumour, which enabled me, by having it moderately drawn, to raise it up from the deep situation in which it was embedded, and of course rendered the dissection more safe and easy. The tumour was almost precisely of the shape of a pear, and when the larger portion of it was dissected out, it was found that a smaller part, resembling the neck of a pear, dipped deep down among the muscles and large vessels of the neck. By following this process, and dissecting with great caution, it was found to be at-

tached to the sheath of the carotid artery, to the cricoid cartilage, and to the trachea. In performing the last part of the operation, the inferior thyroid artery was divided just at the point where it emerges from under the carotid. Though the gush of blood was very considerable at first, both ends of the divided vessel were tied without much difficulty, and the operation was easily finished.

The tumour was found, as before remarked, to be of the shape of a pear, about the size of a hen's egg, hollow, and forming a perfect sac, the parietes of which were nearly half an inch in thickness. The cavity was filled with a serous fluid, and a portion of fleshy-looking substance about the size of a nutmeg, and apparently unconnected with the sac which contained it.

The wound was dressed in the simplest manner, merely by bringing the edges together with adhesive plaster; the patient was put to bed, ordered to keep still, to avoid speaking, and to take thirty drops of the tincture of opium, if she should be in much pain.

No secondary hæmorrhage took place, and no unpleasant symptom of any kind occurred; the sensation of choking and suffocation soon subsided, and in a few days she was able to swallow solid substances with ease, and on the 29th day of the month she was discharged well. I heard from her several months after the operation, and she had experienced no further inconvenience.

Boston, June, 1831.

ART. V. *Some Account of the Pneumonia Biliosa, as it occurred in Hind County, Mississippi, in the Winter and Spring of* 1831. By W. F. LUCKIE, M. D.

THIS disease, with some slight variations, has prevailed as an endemic during the last winter and spring, up to this time. The winter has been unusually severe, and the vicissitudes very great. The disease, as it came under my observation, was ushered in with a chill, which, in some cases, was very severe and protracted; and before the chill terminated, the pain about the chest made its appearance; most commonly in the left side. In some cases there was a general pain throughout the thorax. By the time general reäction had taken place, the local pain became very severe, so as to render respiration painful and difficult; in some cases bloody expectoration came on in a few hours after general reäction. The skin was now dry and hot, countenance much suffused, with a circumscribed efflores-

ance on the cheeks; the breathing hurried, breath generally warm, tongue dry and florid, thirst considerable. In one case, a young lady, a student of the academy of this place, the attack was ushered in with syncope—reäction taking place immediately after her recovery from syncope. In some cases there was pain about the shoulders, under the clavicle, and up the side of the neck; some severe cases of phrenitis also occurred occasionally, which yielded to general depletion by the lancet, pushed to a considerable extent at the very onset, followed by calomel as a purgative. In another case, the pain was seated in and over the left eye, which was almost insupportably severe; it assumed an intermittent type, and would not yield to remedies that were successful in other cases. After general depletion by venesection and cathartics, it continued to return with regularity as a quotidian; I resorted to the sulphate of quinine, which immediately checked it—during the paroxysms the eye became much inflamed and swollen. The lungs in some cases were oppressed; an old gentleman in particular, from the peculiar wheezing or dyspnœa that attended his case, with an almost incessant dry hacking cough; the pain was occasionally shifted from side to side—the suffusion of countenance and purple hue of the lips left no doubt as to the nature of the case. The pulse was generally full and tense, but regular, and required the prompt and free use of the lancet in every case except the young lady before mentioned; she being of very delicate constitution, and strumous habit, and the reäction in her case was not very great, I thought proper to dispense with bleeding. There was great torpor of the bowels, so much so, that the strongest cathartics could not be made to operate well until after venesection.

The first step in the treatment was copious blood-letting, sometimes to the amount of from eighteen to twenty-four ounces drawn from a large orifice. I was governed in the quantity I drew by the effect produced on the system, and the disease; I generally suffered the blood to flow until slight symptoms of syncope approached, or until there was a marked abatement in the severity of the pain, which was almost universal; many persons declaring themselves much relieved before the arm was bound up. In one case, a stout, athletic young man, who had been ill eight days before I saw him, I found it necessary to bleed twice very copiously in a few hours, and to repeat the operation daily for several days; he was labouring under a wild delirium; under the most dreadful apprehensions that the house was falling on him; he would grasp the bed-post with a force which required the exertions of several persons to unloose. He expectorated large quantities of phlegm mixed with much blood; after premising

venesection and an active cathartic, composed of forty grains of mer. dul. followed with castor oil; I applied a large blistering plaster over the seat of the pain, continuing the mercurial cathartics daily, which evacuated large quantities of black, vitiated bile, and occasionally mild expectorants. He recovered.

Every case manifested hepatic derangement; in some there was complete obstruction to the flow of the bile into the duodenum—torpor or the suspension of the secretion of bile was many times present, which I think was proved by the first doses of calomel bringing off no bilious matter.* In those cases broken doses of calomel adminis-

* This circumstance of the first doses of calomel bringing away little or no bilious matters, is common in fevers, (always occurring in those cases in which the gastro-intestinal irritation, usually the first link in the chain of phenomena which constitutes fever, has not been transmitted to the liver,) and is confirmatory of the opinion so often advanced in this journal, that the dark bilious stools of which so much is said by the advocates of the calomel practice, are often entirely the product of that medicament. The primary effect of this article is to irritate the gastro-intestinal mucous membrane; this irritation is subsequently transmitted to the biliary apparatus, and as is always the case when a secretory organ is stimulated, the liver pours out an increased quantity of bile; and if the irritation be continued, this secretion becomes vitiated. We see this constantly occur from the use of stimulating food or drinks, and it may be induced in a healthy individual by the repeated administration of calomel.

When the other organs are in the due performan c of their functions, and their forces are unimpaired, they may be able to resist the influence of the morbid condition of the liver, so as not to be drawn in to participate in it. In this case the hepatic irritation is partly relieved by the increased secretion which results from it; the organ after a while acquires a *tolerance* of the remedy, or to express it in other words, the medicine loses its effect, as usually happens on the repeated administration of any medicament—and the secretions of the liver may gradually assume their natural character. The credit of the *cure* is then ascribed to the calomel!

If, on the contrary, the other organs are impaired in their forces, and perform their functions but feebly, they readily participate in the hepatic disorder, and a train is then lighted which ends either in the speedy destruction of the patient, or in the permanent disorganization of one or more of the organs, and especially of the liver.

We have already alluded to the fact that the liver may be immediately deranged by the cause which induced the fever. This cause, whether acting primarily on the stomach, skin, or some other part, soon induces irritation of the first mentioned organ, and this irritation may be transmitted to the liver, and hence the bilious discharges which are sometimes observed in fevers before any medicine has been administered. With what propriety can the practitioner in such cases hope to obtain relief by the administration of an article calculated to produce the very effects he is desirous of removing? The homo-

tered every three or four hours in combination with opium or Dover's powders, succeeded in freeing the portal system. The application of blisters over the seat of the pain after bleeding and purging, were universally serviceable, and on some occasions I applied the blisters so as to insure its operations simultaneously with cathartics. No other medicine would answer the purpose of a purgative but calomel; those dark, pitchy stools could only be brought off with calomel, the operation of every dose of which would produce considerable alleviation in the disease; the evacuations becoming paler and more natural by each succeeding dose. Those dark discharges, in every instance, had to be brought about before any amendment in the functional derangement of the liver would take place. Squills and senega were used as expectorants—drinks principally Lynn bark water—diet of the lightest quality, such as toast, light soups, rice, sago, &c. &c.

There was a peculiar susceptibility to the local effects of mercury, several cases of ptyalism taking place under the above mode of treatment, which was completely successful, not having lost a single patient. The disease has recently changed its type to intermittents and remittents, such as are usually called vernal. The above diseases appear to have formed a connecting link between the fall and spring fevers, modified by circumstances.

Clinton, Miss. April 21st, 1831.

Art. VI. *Case of Bilious Remittent Fever, accompanied by an extensive Irritation of the Mucous Membrane of the Mouth.* By C. B. Hamilton, M. D. of Washington, D. C.

In the course of my practice during the last fall, I was called upon to visit a family in the vicinity of this city, consisting of five members, four of whom were labouring under one or other of the forms of our autumnal bilious fever. The mother, an old woman, was the only one exempt from disease; but during the two or three last visits I paid her children, she complained of a soreness of the mouth, which, considering it as something trifling, and not being particularly requested, I did not examine at the time.

öpath will at once answer "*similia similibus curentur*"—but the advocates of calomel in this country would be no doubt not a little indignant at being assimilated with the disciples of Hahnemann, and we therefore leave it to them to reconcile this incongruity.—Ed.

A few days after I had discontinued my attendance upon the other members of the family, I was sent for to visit the mother, who, I was informed, had become so much disordered by the sore mouth, as to be confined to bed, and seriously indisposed. On my arrival, the patient informed me that the evening before she had been seized with a violent chill, to which a fever had succeeded, which though considerably abated, had not entirely gone off. She also informed me that the inside of her mouth felt as if it had been scalded. On examining the state of her pulse I found that she still laboured under considerable febrile excitement, and upon a "prima facie" view of her disease, without a previous knowledge of a local affection, I should have pronounced it a common bilious remittent, there being every symptom that characterizes it, except those of gastric irritation, which are common, though not uniform attendants. Upon an examination of the interior of her mouth I was presented with a most unusual spectacle. The tongue was so much contracted in its transverse diameter, as to assume almost the cylindrical form, and together with all the surfaces included between the upper margin of the pharynx and the lips and cheeks, was covered with a thick coating of seemingly condensed mucus, generally of a light ash colour, that upon the superior surface of the tongue being of a darker hue. By detaching portions of this coat with the finger nail, and exposing the subjacent membrane, the latter appeared from its intense colour, to be highly injected with blood, though there existed no swelling or thickness of any of the parts. In this state of things, apprehensive of coming mortification, and knowing how prone the friends of the sick are, when such an event takes place in fevers, to ascribe it to the too free administration of mercury, I resolved to deviate from my usual course of treatment in bilious remittent, which consists mainly in the administration of mercurial purgatives. I directed that the patient's mouth should be frequently washed with some cooling, emollient fluid, as the infusion of linseed, gum water, &c. and occasionally with a decoction of the red oak bark; that the bowels should be kept open by the use of mild aperients and injections, and that the most rigid antiphlogistic regimen should be strictly adhered to. Under this course of treatment she continued for ten days, becoming gradually worse and worse, until what has been denominated the typhoid state of bilious fever was completely established. Her strength was greatly depressed; she had delirium, picking at the bed-clothes, and "subsultus tendinum." For some distance around each corner of her mouth, and down the centre of her under lip, in which directions the tongue was frequently thrust out, the skin became irritated

by its contact, and assumed a dark and sloughy appearance. The interior condition of the mouth had undergone no change. Such was the situation in which I found my patient, ten days after the accession of the fever.

I determined to make an alteration in the treatment, and directed that a powder composed of five grains of calomel, two of aloes, and one of extract of colocynth, should be given her every four hours. In the interval a few ounces of an infusion of bark and serpentaria, with porter and water as a drink; this course to be pursued until the bowels were freely evacuated. Twenty-four hours after, I found the condition of the patient greatly improved. The medicines had operated freely, bringing away large quantities of glairy matter, very similar to tar both in colour and consistence; the delirium and subsultus had gone off; the fever was much abated, and the morbid coating of the mouth was becoming detached and removed at each abstersion. The same general treatment, modified according to circumstances, was continued for a few days longer, under which the local and general diseases were removed, and the patient happily restored to health, without experiencing the unpleasant effects upon the gums and salivary glands, so frequently the result of the repeated administration of mercury in our autumnal diseases.

To the advocates of the local origin of fever from some point of internal irritation, the above case will, I conceive, furnish a corroborative evidence of the correctness of their theory. The local affection will no doubt be considered a consecutive effect or accidental coïncident of the general febrile irritation of the system, by those who consider fever an idiopathic disease. Without entering into the discussion of these respective opinions, I shall content myself with having given a correct history of the case.

Washington City, March 28th, 1831.

ART. VII. *On the Treatment of Hæmorrhoids.* By William M. Fahnestock, M. D.

IN the thirteenth number of this Journal, page 179, et seq.* there is a very lucid and succinct summary of the views entertained at present relative to the nature of hæmorrhoids, and as it would be useless for us to repeat what is there said respecting the pathology of this

* Rev. *Des Hémorrhoïdes.* Par A. J. Montègre.

most tormenting and disagreeable complaint, we shall restrict ourselves to offering some considerations regarding the means of administering to its relief.

We shall not enter into any inquiries upon the propriety of interfering with the disease, or consume time with the question of the danger of arresting its progress. It is enough for us to know, that any inordinate irritation or discharge from the system, is a legitimate subject for the medical art; except from neglect or improper treatment in the early stage, it has assimilated its action with the operations of the general system, and, from habit, constitutes a necessary evacuation to maintain the healthful exercise of some other more important organ.

Purgation, which more or less modified, constituted for ages the general practice in this disease, and still continues to be the chief reliance of the physician, we conceive to be the most impolitic, if not the most prejudicial; and it shall be our object to expose the error of such a course, and advocate another, which we have in our power to sustain, not only by reasoning, but by a considerable experience. This last is certainly the best test of the value of therapeutic remedies, when derived from a strict analysis of the phenomena manifested during their operation; but even experience may be fallacious; and it is to this fruitful source of error, that we have had, heretofore, so much uncertainty and absurdity engrafted upon our systems of medicine. *Experientia fallax* was a conclusion arrived at in the earliest age of our science—even by the father of medicine.

It is one of the prominent features and distinguishing benefits of modern or physiological medicine, to have instituted a minute investigation into the disturbing properties of medicinal substances, and to have pointed out the stimulating qualities of the evacuant medications. Previously esteemed as debilitating medicines, incontrovertible facts prove them to produce considerable excitation on the mucous membrane of the alimentary canal, and whatever be the influence they exert on the general system, the effect on the tissue upon which they operate, is indubitably stimulant.

Prior to the indefatigable researches of the pathological school, and the discovery of the disturbances produced on the organic actions and functions of the different tissues and organs by medicinal agents, purgatives were used for almost every malady; but in this age of scrutinizing observation it is not sufficient to know diseases simply by their name and to prescribe for symptoms. It is necessary to understand the cause; to investigate the disorganization of structure; and not only to know the immediate but also the ultimate operation

of the medications employed: that is, not only the evident evacuation, but likewise the internal actions produced on the tissue to which they are applied, and those to which they are closely connected by intimate sympathies.

Thus, by physiological analysis it will be found, that the hæmorrhoidal affections, instead of being a distended or varicose state of the hæmorrhoidal veins, consists in high irritation and inflammation of the mucous membrane of the rectum, with effusions of blood into the cellular tissue; and that purgatives, instead of reducing by detracting humours, produce an increased afflux to the part, and create greater lesions and more permanent congestions.

We propose first, to inquire into the immediate effects of purgative medicines on the intestinal surface. These medicines, when taken into the alimentary canal, induces an increase of sensibility, irritation, and tumefaction of the mucous membrane which lines its cavity; the secretions become more abundant, and the contraction of the muscular fibres actively excited to expel the fæcal and serous discharges. All the purgative substances act in the same manner, but with different degrees of violence, and upon different portions of the digestive organs. They all produce a certain degree of irritation in the intestines, accompanied by redness, increased temperature, slight tumefaction, and sometimes pain. The disorder which then takes place is characterized by all the circumstances of a transient or somewhat permanent enteritis. In most cases a sense of obstruction, of heaviness, and even heat is felt at the epigastrium, with a reluctance of food—as the irritation passes from the stomach to the bowels, borborygmi come on, the abdomen becomes tumefied, and then colic pains and frequent stools follow. In its progressive march the irritating substance acts successively upon the various parts of the intestinal canal. In the duodenum it stimulates the orifice of the ductus choledochus, and promotes a rapid and copious secretion of bile; and as it proceeds downwards it excites the exhalation of a quantity of serous and mucous fluids, until it reaches the rectum and is expelled. When substances of an highly irritating nature are made use of, instead of mucous and perspiratory, the inner coat of the intestines furnish a certain quantity of blood; the colic pains are very acute; the anus becomes hot; violent retchings and tenesmus succeed each other. The duodenum, the lower portion of the ileum, the cœcum, and the inferior extremity of the large intestines specially receive the effects of the irritation, traces of which are to be found in the remaining portions of the whole canal; and the enteritis which follows persists for some days, and even has been known for weeks and months. The

sympathetic phenomena produced by purgatives, evince great disturbance in the functions of the intestinal canal. When colic pains come on, the pulse becomes irregular and intermittent; during the whole of the operation of the remedy, it is smaller and more frequent than in health. A general and painful sense of coldness or shivering is occasionally felt; the skin is dry; perspiration, urine, and the secretions of the mucous membranes of the upper part of the body are either diminished or suppressed. Muscular strength is impaired; there is an unwillingness to move; the sensations appear vague and imperfect; the intellectual functions are slow, and the inclination to sleep is often irresistible. The severity of these symptoms is in proportion to the intestinal irritation; when it is moderate they soon disappear, but when the impression of the purgative has been too great, the inflammation, far from disappearing, becomes stationary, and may even run into a state of adynamia. Purgatives never debilitate the intestinal canal; on the contrary they stimulate it to a certain extent, and increase its secretions, serous exhalations and peristaltic motion. Laxatives act in the same manner as drastics, with this difference only, that their impression is not so powerful, and that they may be more readily assimilated. We may easily pass by insensible gradations from the milder minoratives to the most energetic drastic, without being able to draw a line of demarcation. The particles of jalap and of croton oil, when largely diluted, are merely laxative; those of manna and cream of tartar, placed in contact with an intestine, the sensibility of which is much exalted, may inflame it to a high degree, and give rise to all the phenomena of a violent purge.

Begin, to whose excellent work, *Traité de Therapeutique*, we are indebted for the above views of the modus operandi of this class of medications, after an extensive and diligent examination of this subject, deduces the following conclusions:—1st, purgatives constantly stimulate or irritate the intestines; 2d, they never occasion general debility, but in consequence of the pain and fatigue they produce, by the cessation of the irritation previously existing, and lastly, for the material losses to which they give rise; 3d, when they exasperate instead of curing irritations, they increase the fever, heat, and all the sympathetic excitements, or produce general adynamia.

The foregoing considerations may admonish the reader to be careful and reserved in the employment of purgatives, and a cursory notice of a few of the laxative substances proposed for the cure of the hæmorrhoidal affections will expose the fallacy and absurdity of

using such irritating articles to the highly delicate surface of the inflamed mucous membrane.

Cream of tartar from its supposed very mild and cooling qualities has been largely used for hæmorrhoids. We have already remarked that even this, when administered in an inflamed condition of the mucous membrane of the intestine, is capable of exciting violent purging. The same authors who speak of it as a very mild and cooling laxative, ascribe to it the power of exciting the intestinal exhalents to a copious effusion of serous fluids, and it even bears the reputation of a good and certain hydragogue! Are such articles wanted to subdue inflammation in the lining membrane of the rectum? We think not, and discover an insurmountable objection to it, from its acknowledged property of weakening, by frequent repetition, the digestive organs.

Dr. Gregory* recommends calomel combined with antimonial powder three successive nights, to be followed by neutral salts in the mornings, when the disease is attended with, or arises from a heated state of the system. However much calomel is administered in this country in almost the whole catalogue of diseases, there are but few, if any who resort to it in this complaint. It is universally banished and condemned as the worst of remedies, from the very powerful and peculiar impression it leaves on the mucous surface of the alimentary canal, which must be accelerated by the adjuvants, the neutral salts; unless, indeed, the Italian principles of their operation, contra-stimulant be admitted; which we are not, as yet, disposed to accede to.

Sulphur for a long period sustained the reputation of being a specific in this disease. We do not think that we underrate the article when we declare our conviction, from a faithful experience, that many more will be disappointed in their dependence upon its virtues than will find benefit by it. Sulphur is a very insoluble substance, and creates a general excitation throughout the canal, without producing much exhalation from the capillaries of the intestinal surface, and consequently procures but small evacuations to relieve the distention of the varicose veins according to the old pathology, and upon which erroneous views it was prescribed. Administered internally, say MM. Edwards and Vavasseur, sulphur acts as a purgative; when taken in less quantity it increases animal heat and the acceleration of the pulse; it acts as a stimulant. Its exhibition continued for any length of time is capable of producing very serious conse-

* Elements of the Theory and Practice of Physic, Vol. II. p. 363.

quences caused by its very stimulating action.* All writers concur in ascribing to this medicine an especial action on the lower portion of the bowels, for which reason we disapprove of its use in the disease under consideration. Let impartial experiments decide the issue.

The distinguished Edinburgh professor, whose name we have already introduced, proposes to administer the sulphur in combination with the electuary of senna. So certain are the irritating and griping powers of senna, that it is scarcely ever administered in ordinary complaints, as a common purge, without using some modifying agents to correct its distressing effects. Even in small doses it proves a very powerful and irritating medicine, and therefore not well calculated to allay and remove inflammation in the tissue on which it acts, however disguised by medicinal condiments.

Balsam copaiva has been highly extolled, and is now one of the most prominent articles recommended for this complaint. It was introduced to the medical public by Dr. Cullen, who acknowledges that he derived the information of its efficacy from an empiric. A little attention, however, to its properties, will show how utterly inapplicable it is in most of these affections. Almost all the writers on materia medica and therapeutics concur in ascribing to it very stimulating and exciting powers, producing nausea, griping, and acrid alvine evacuations. Dr. Armstrong informs us, that when given in very large doses, it causes a sort of *vibratory feeling in the brain*, and a *febrile anxiety*, with a *mental disturbance bordering on insanity;* and the same author tells us that it sometimes produces an itching irruption on the skin.† Does it require any argument upon these facts to prove the condition of the intestinal surface? Any person accustomed to analyze the effects of medications, will recognise the exalted condition of the mucous membrane of the primæ viæ, and that to an intense and dangerous degree. The learned Dr. Good says, "I have tried this medicine often, frequently without the slightest benefit, though I have varied the dose: and when it has appeared useful, it has been chiefly in the case of *mucous* piles; and hence I am induced to ascribe its salutary effect rather to the common principle on which it is well known to act in irritations of mucous membranes generally, than to its laxative power: I mean that of stimulating the membrane throughout, and thus producing a revulsion in the immediate vicinity, as we take off an inflammation in

* Manual of Mat. Med. Togno's and Durand's Trans. p. 246.

† Armstrong on Pulmonary Consumption, p. 274.

the eye by applying a blister to the temple or behind the ear."* The explanation of the copaiva acting by revulsion is certainly correct; but the author errs in comparing it to the revulsion produced by blisters at the back of the ear; that is a counter-stimulation—a revulsion acting on sound parts. The application of copaiva to the inflamed mucous surface, is operating upon the principle of *direct* revulsion; not like the other—stimulating another tissue and drawing the morbid excitement from the original seat of irritation to a distant and less sensible surface. Direct revulsion, in the case of comparison, would be to apply the cantharides to the inflamed conjunctiva! This kind of revulsion we are sure no practitioner would have the temerity to pursue, and the same philosophy which would deter us in the one case, should equally influence us in the other. Would any person with a knowledge of the pathological condition of the intestinal surface apply so irritating a substance to the very sensible and excited membrane? Would he not by this very process stimulate the capillaries to greater action, and consequently increase the tumefaction and induration? We do hope that reflexion has taken the place of dull routine and empirical practice; until it does, we are confident that the physician will be disappointed in his expectations, and his patient remain a sufferer of this disease—made obstinate by injudicious treatment.

Recently Dr. JACKSON, of Northumberland, urges with much zeal the employment of rhubarb.† With all proper deference for the respectable source from which the practice emanates, we still must add a remark on the powers of this medicine. The adviser very correctly observes, that "in the treatment of this disease, the business of the physician is to preserve a continually loose state of the bowels, without the use of any drastic or acrimonious purgative; or in other words, to avoid on the one part, the least tendency to costiveness, and on the other, every thing like severe purging, or even a relaxing diarrhœa. Some means, therefore, he must seek, which shall procure in some cases one, in others two or three loose but consistent stools every twenty-four hours:" but we do not concur with him in ascribing to his favourite drug these desirable qualities. Rhubarb, though considered a mild laxative, is often a very active cathartic, and not unfrequently produces violent gripes. It also possesses a considerable astringent quality, and generally leaves the bowels in a costive tendency after its operation: and from these circumstances we deem

* The Study of Medicine, Vol. I. p. 269.

† American Journal of the Medical Sciences, Vol. VI. p. 315.

it not suited to cases of inflammatory action in the alimentary canal, or calculated to overcome constipation. Our principal objection, however, to the remedy is, that it is required to be taken too constantly, as we do not approve of continually disturbing the digestive function by medications. Another exception we take to the use of this medicine is, that we are often obliged "to modify its operation with a little ginger, caraway, fennel, or some other aromatic." All articles of this kind are always to be sedulously avoided from their heating qualities. We do not wish to set in judgment upon the value of a remedy which we have not employed to any extent, further than reasoning from the acknowledged properties of the drug and established principles of therapeutics. Should we find it necessary at any time to have recourse to a course of purgatives, or perhaps in more acceptable language, laxatives, we shall embrace the opportunity to give it an impartial trial. But all purgatives, however mild, leave, in our opinion, an irritation in the intestine, which constantly tends to excite a recurrence of the disease. We have never known a case radically cured by these medications, but daily see a succession of relapses, after having been treated by purgatives, which is the most unerring testimony of their baneful tendency. And as the gentlest laxative has a local irritant power, they may also prove injurious, and are therefore to be regarded in these affections with jealous apprehensions. Until the practice of HAHNEMANN, predicated on the law *similia similibus curentur*, and consisting in the employment of such remedies as are capable of exciting analogous symptoms to those of the malady itself, or the doctrines of physiological medicine shall be exploded, we shall remain distrustful of the propriety of using cream of tartar, calomel, the neutral salts, sulphur, senna, balsam copaiva, rhubarb, or any of this class of disturbing medications, in cases of exalted sensibility and inflammation of the intestines.

Having tried purgative and laxative medicines long enough to be convinced of their injurious tendency, our practice of late years consists principally in rest, diet, and mucilaginous drinks—to lay aside the disturbing medications and court the exercise of the natural functions. A patient labouring under an attack of hæmorrhoids, has the function of the alimentary canal much disturbed, and its lining membrane in an highly irritated and inflamed condition. The excitement in many cases extends to other parts of the viscera, and frequently fever is developed. Costiveness, the general immediate cause, is the principal difficulty to surmount; but is this effected by a few purgatives? We all know very well that there is always a tendency to costiveness after the operation of this class of medicines,

and we have just shown, that instead of diminishing the irritation, they increase it, and sometimes even to an alarming degree. The effect then of a cathartic is directly the reverse of the indication in the treatment of the disease; it excites an increased afflux of fluids in the capillaries of the membrane, and the accelerated impetus creates more extensive lesions and congestions; and thus produce the very tumours it is our duty to reduce. Success with purgatives is certainly very ambiguous, if the practice is not attended with much danger; at least in our hands, and we made use of the mildest, we freely acknowledge, that the amount of suffering from their administration, greatly surpassed the relief obtained by their use; and we are now satisfied that most is to be hoped for when they are entirely abandoned.

On being consulted in a case of hæmorrhoids, our course is, to place the patient, if practicable, perfectly at rest for a few days, and in all cases to prescribe emollient drinks, and order soft diet, such as corn, rye, or oatmeal mush and molasses—the rye and oatmeal we prefer. By rest the patient is relieved in a great measure from the distressing symptoms, and by observing strictly for a few days the above regimen, the irritation is allayed, and the regular exercise of the bowels established; and when this is accomplished, health is restored. Emollient drinks should be taken plentifully, and no others. Emollient or mucilaginous drinks have a special action on the living tissues—they reduce the susceptibility, as well as intense redness, and the force of their actions; and when applied to the irritated mucous membrane, have the power of subduing irritation, alleviating pain, and restoring the tone of the organic actions.

The greatest difficulty to encounter in this course is, to get the sufferer to abstain from all other articles for a short period. So fond are mankind of indulging their appetites, that many prefer to become martyrs to their gratifications, than make a slight sacrifice for a great deal of comfort. But we are sure, that if the physician deals honestly with his patient, and explains minutely the nature of his complaint, the importance of being very rigid in the rules regulating his diet, informing him of the injury from the slightest deviations, until the irritation and lesions are restored, he will find but little trouble to overcome all the obstacles. It is only the want of correct information and faithful admonition that makes the invalid so careless respecting attention to these seeming trivial though important matters; they should understand it, and be made acquainted with the consequences of medicinal applications, and the results of the different changes their operation will produce. This manner of proceeding

will always secure the proper attentions to the advice of the physician, which existing circumstances often imperiously demand, but which too frequently are entirely neglected. We have found no difficulty with our patients after apprising them of their condition, and the consequences attendant upon their delinquency; neither have we ever had a patient who strictly observed our directions return to us with a relapse.

Perseverance in the commencement, and until the irritation is completely allayed, is the principal object. For this purpose rye or oatmeal mush with molasses is to be made the common food, and barley water or other mucilaginous beverage, the constant drink. After the irritation is subdued, our advice is, in all cases, to continue to make one meal, supper, of the mush diet, at least for a month or two. By these means a soluble habit of the bowels may be established. And should at any time more than one day, or at most two days pass without an evacuation, the afflicted should recur to the mush to correct it: and should any premonitions of an attack appear, resorting to the above advice may obviate it entirely. We have arrested the formation of this disease by an early resort to these means, and we are confident that it is the best prophylactic measure that can be pursued, whenever the least symptom manifests an approach of an attack.

The topical applications recommended are numerous, and as opposite as they are diversified. We are acquainted with but two which deserves much notice. The first is cold water. This application is the most grateful of all others to any inflamed surface, but it is not always the most beneficial, nor is it the most prudent: in the treatment of this disease it has the sanction of many high names. We, however, have derived most advantage from a liniment made of burnt cork. Our mode of preparing it, is to char very fine, soft corks, which we rub in a mortar and bolt through a very fine cloth or sieve. It is then triturated with pure olive oil, to the consistence of paint, and to be applied frequently with a fine camel's hair pencil. The relief obtained by this application is very "prompt and even wonderful." We have seen persons in the most excruciating agony, from protruded piles, almost instantly relieved by this liniment. We cannot account very satisfactorily for its mode of action in allaying irritation; but similar effects obtain from its employment in violent cholera morbus administered internally. The origin of the medication we cannot learn: we had it from our preceptor, the late Dr. MARTIN LUTHER, who used it during a practice of twenty years, with distinguished success.

This is our treatment of simple hæmorrhoids. By strict attention to the above, we have never had occasion to resort to the painful expedient of excision. It is neglect, or maltreatment of the disease in the early stage, which renders it chronic and obstinate: this state, we believe, can only be remedied by continued perseverance in the course pointed out, until the irritation is entirely subdued, and a new habit is formed in the alvine evacuations.

When the case is attended with fullness of pulse, fever, and restlessness, we detract blood from the arm; and should the mucilaginous drinks fail to move the bowels, we then administer a small dose of castor oil, which is the only laxative we use under this form of disease.

Some time since, we conceived the idea of applying the extract of belladonna to overcome the stricture of the sphincter ani, which frequently produces strangulation, and presents a most formidable obstacle to the reduction of the tumour within the anus, on the same principle that it is used to dilate the pupil of the eye before an operation for cataract; but have been so fortunate with the means above recommended, that we have not met with a case which required us to resort to any other remedies. Lately we discover that the ointment of the belladonna has been successfully employed by MM. De Laporte and La Borderie,[1] in cases of spasmodic contraction of the anus and the rectum. We think this remedy deserves much attention, and a faithful application, to test its virtues; by which we may hope, in many cases, to save our patients from the horrors of a surgical operation.

We do not deem it necessary to swell this article with a narrative of cases; an experiment or two will be the best illustration that our readers can have of the efficacy of the plan here recommended. Hereafter, should we find it necessary, we may furnish a few cases to contrast the purgative with the emollient practice.

The simplicity of our treatment may be made an objection by those who are fond of wielding the potent armoury of medicine, but its simplicity is its merit; for inasmuch as we advance to a knowledge of the laws of the animal economy, and understand the disturbances of the organism in disease, we will direct our remedies to modify the irritation and restore the exercise of the normal functions, by those means which approximate most closely to its healthful actions. And as we approach this consummation depends the certainty of success, and the establishment of a practice on a sure basis.

[1] See this Journal, Vol. VI. p. 248, and Vol. VII. p. 250.

ART. VIII. *Case of Labour.* By ASHBEL WOODWARD, M. D. of Franklin, Connecticut.

THE subject of this communication is a Mrs. J. M. aged twenty-eight, delicate, of small stature, and narrow pelvis; on the 8th of last February, (1831,) in the eighth month of pregnancy with her first child, she had a fall, from which she sustained considerable injury, particularly in the region of the loins. She continued, however, to recover from the immediate effects of the accident without medical aid till the evening of the 11th, when after a day of unusually hard exercise, she was seized with pretty regular *pains*, which became considerable, and she was taken with *uterine hæmorrhage*, which gave alarm, and I was sent for. When I arrived the pains had mostly subsided, but learning that the hæmorrhage had been considerable, I thought it adviseable to make an examination. I found the os uteri high up against the sacrum and very little dilated—the head of the child was resting upon the superior strait of the pelvis. Judging that she might, with prudence, go to the full period of utero-gestation, I enjoined rest, with an antiphlogistic regimen, and left her. Under this course she so far recovered as to attend after a few days to some trivial domestic duties.

On the 3d of March I was again sent for, and on arriving, learnt that the previous day she had walked to a neighbouring house, over a very bad road, that after returning home she had had a sick night, and that early in the morning her *waters* had escaped. The abdominal tumour had now considerable subsided. Although she had very little pain at this time, I made an examination, and found that the situation of the os tincæ had not materially changed since the first examination. The mouth of the uterus would merely admit the end of the finger.

She continued to discharge her waters till the evening of the 10th, or more than a week from the commencement of the evacuation. During the whole period there was a constant dribbling and a part of the time the discharge was profuse. Towards the close it appeared muco-purulent, and was somewhat offensive. There was considerable general debility induced by the evacuation, particularly a sense of weakness in the back. During this time very little change took place in the position or condition of the uterus, though irregular pains occurred daily.

On the 10th, at sunset, (more than one week from the rupture of the membranes,) the pains became regular and striving. The os

uteri now descended, was dilated to an inch in diameter, and without tension. After the mouth of the womb had acquired this degree of dilatation, the pains, though apparently severe, had very little effect upon it further, not seeming to tighten it much during their recurrence, by reason of the head's resting upon the superior strait of the pelvis, which was rather narrow. The presentation was the first of the natural head presentations.

This state of things continued till the next midnight, or about *thirty hours*, without effecting any material change. At times it would seem from the character of the pains that we might expect a speedy termination of labour, and then they would become irregular and finally subside. Up to this time the bowels had been kept free, there had been no permanent difficulty in making water, the system had not required reducing, nor indeed much support further than simple unirritating nourishment.

At 1 o'clock A. M. of the 12th, she was seized with cramps in her lower extremities, had a severe pain in her back, and became very restless. There being now little prospect of a speedy termination of labour, I requested that Dr. KNIGHT might see my patient in consultation. Before he arrived I gave forty drops of laudanum. This relieved the cramp to some extent, afforded a little temporary repose, and gave some regularity to the pains.

In consultation it was agreed to wait still further without interference, as the system was not sinking, and as there was no apparent resistance on the part of the pelvis, (though narrow,) which might not be overcome by the unassisted efforts of nature.

We accordingly waited till 2 o'clock P. M. during which period the pains were most of the time hard, but they did not advance labour otherwise than to increase the dilatation of the os uteri. The pains now subsiding, and the strength becoming exhausted, and as the head was not in a situation for the use of the forceps, and as nothing was wanting but powerful expulsive efforts of the uterus to accomplish delivery, the os tincæ being well dilated and yielding, we resolved to try the *ergot.* I would here remark that wine and cordials were now given to keep the system from flagging, but with transient good effect. The ergot was now administered in infusion in three grain doses, and repeated every five minutes till half a drachm was given. This produced nausea, and a part of it was rejected by the stomach. It also renewed the uterine pains which now became more frequent, but did not as before leave an interval of repose. Desirous of pushing the remedy as far as practicable, the same

quantity was subsequently given, though at longer intervals between the doses. This also excited vomiting, but increased the action of the uterus *till* a permanent and tonic contraction was the consequence. The uterus so firmly embraced its contents, and descended so far into the pelvis, that the abdominal tumefaction in a degree disappeared, subsiding into a tumour very unyielding to the feel. The head was engaged in the superior strait and immoveable. The os uteri became very much diminished in size, even to one-third its dimensions before the administration of the ergot and very rigid.

Some of the other effects of the medicine were constant and intense pain in the back and lower extremities, great general suffering and restlessness. This condition of the case continued from 6 o'clock P. M. till 11, or five hours, without any intermission or amendment.

The only change that took place was a gradual failure of the powers of the system.

At this critical juncture a favourable termination of the case was almost hopeless and quite unexpected. The contraction of the uterus was of such a character as to offer an almost insuperable objection to the use of the crotchet. In addition to this, it seemed quite apparent that the patient could not endure the operation; therefore as a dernier resort we resolved to try opiates. Accordingly one hundred and fifteen drops of laudanum were given at three times in one hour and twenty minutes, it being given in divided doses in consequence of the irritability of the stomach. It allayed the suffering of the patient to such an extent that a sleep of two hours continuance was induced. She was aroused from this by the return of regular and very efficient labour pains, which in *one hour and thirty minutes* more terminated labour by the birth of a living child.

The opium completely removed all the unpleasant symptoms which had supervened subsequent to the administration of the ergot, and a restoration of the natural action of the uterus was the consequence.

What agency the ergot had in forwarding or retarding parturition in this particular instance I will leave for my readers to decide.

In relation, however, to one point, I would make a single remark further. Considering the state of labour at the time the laudanum was given, the condition of the whole uterus, but more particularly the rigid and contracted state of the os tincæ, the fixed situation of the head having, as before remarked, merely engaged in the pelvis, and the sinking of the system, we have the most satisfying evidence that *delivery* could not have been accomplished by the ergot alone.

Neither indeed am I prepared to say that opium alone would have been fully adequate, though it is a medicine upon which I should place great reliance under similar circumstances.

Franklin, Conn. May, 1831.

ART. IX. *Contributions to the Pathology of Infantile Convulsions.* By WILLIAM E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.

CASE I.—Ellen, aged four years, a fine healthy child, with dark eyes and hair, the daughter of the Right Rev. Henry U. Onderdonk, had a slight cough, but not sufficient to keep her from infant school, on Monday, the 10th of May, 1831. The next morning on waking she was feverish, and her mother gave her a dose of calcined magnesia. I saw her at 4 o'clock P. M.; her symptoms then were hot skin, full, frequent pulse, and a slight uneasiness in the abdomen. In the forenoon her head had pained her somewhat, but when I saw her the pain had ceased. She was entirely collected, and answered distinctly and promptly to the questions put to her; her tongue was slightly furred. Upon close inquiry in regard to every region of the body I was not able to distinguish any particular local complaint. After my visit she conversed with her mother, and requested her to sing a song for her, to which the child was attached. I ordered a dose of castor oil which she took.

At 5 o'clock she was seized suddenly and without premonition, with universal convulsions, extending over the whole muscular system, incessant violent rolling of the eyes, laboured respiration with frothing at the mouth and perfect insensibility. Dr. E. J. COXE being at hand was sent for. He had two cups applied on each temple, a warm bath for fifteen minutes, and then sinapisms to the extremities. He also ordered an injection, the active ingredient of which was assafœtida; this was discharged after a few minutes.

At 7 o'clock I saw the child and had a vein in the arm opened, from which I took four ounces of blood; after a short time, about one hour, the convulsions were much mitigated and the respiration improved, but the insensibility continued with pupils contracted. At 8 o'clock a blister was applied between the shoulders; after having wrapped her in a blanket dipped in warm water, which was kept around her for half an hour, and produced a copious perspiration.

At 10 o'clock I saw her again; the symptoms were about the same as when I left her at 8 o'clock. At 12½ o'clock she died, after a slight convulsion.

Autopsy seventeen hours after death.—Present Dr. Coxe. No perceptible putrefaction.

The medulla spinalis was first exposed from one end to the other. A diffused ecchymosis of blood, amounting in all to perhaps a drachm surrounded the upper thoracic portion of it on the outside of the dura mater. The medulla was strong, very elastic, and was easily torn into strips longitudinally; there was no perceptible morbid change in its structure; on the contrary it seemed to be remarkably healthy. It had about half an ounce of encephalo-spinal fluid. The brain was then exposed by removing the skull-cap, which had the usual tenacious adhesion to the dura mater at this age. The venous vessels of the pia mater were all at an extreme degree of distention from the blood: the surface of the brain itself, that is, the cineritious matter was of a chocolate colour, from the great congestion of blood. The substance of the brain was carefully explored throughout, and was found universally in the highest state of venous congestion, so that the blood readily flowed from it wherever it was cut. No extravasation of blood was found in it. The lateral ventricles contained each about one drachm of limpid serum. The pineal gland was in the state of a small cyst. The substance of the brain was very soft, yielding, and moist. part of which may be accounted for by the age of the child.

Thorax.—Heart healthy; right auricle contained a white polypous concretion equal in bulk to half an ounce. The lungs had suffered much from the congestion, and extravasation or ecchymosis of blood in them. The upper lobe of the left lung was in a healthy state, but the lower lobe had the solidity of a coagulum of blood, from the quantity of the latter which had accumulated and was extravasated in it, and it was of a dark venous colour. The two upper lobes of the right lung were healthy, but the lowest was *emphysematous*, and some blood was also extravasated in its tissue, and gave to it a light arterial colour.

Abdomen.—Its viscera were very destitute of blood, and were in a normal state, excepting the muciparous glands of the duodenum and colon, which were numerous, prominent, and about the size of millet seed.

The inference from this case is, that it was a primary acute affection of the brain, which from its state of irritation threw the whole of the system into disorder, and that the accumulation of blood in it

became so extreme that it was impossible to effect a revulsion by the cupping, bleeding, sinapisms, and warm bath.

The congestion of blood in the lungs was evidently of very recent date, and was probably produced by the disturbed respiration. There was enough of them left sound for the purpose of life, provided the brain could have been relieved.

Case II.—*May* 28, 1831. Examined this day at 12½ o'clock, for Dr. Edward J. Coxe, a child of Mr. Evans, in Thirteenth street, who died last night at 2 o'clock, in convulsions, which had began at 10 o'clock in the evening. This child was well on the 26th, and was permitted in the evening of that day to eat of orange; the next day she was somewhat indisposed and feverish; in the evening, at the time stated, universal convulsions came on, which lasted till she died. She was bled from the arm by Dr. Coxe, two ounces, had leeches applied to each temple, and also took two tea-spoonfuls of antimonial wine, which did not produce vomiting.

Autopsy eight hours after death.—Brain very much congested with blood, soft and watery—vessels of pia mater much distended—tunica arachnoidea universally separated from pia mater by serous effusion beneath it, small quantity of serum in ventricles. Medulla spinalis not examined.

Viscera of thorax healthy.

Viscera of abdomen generally healthy. Mucous coat of stomach apparently sound and of a pearl colour; in the left extremity of this viscus was found a piece of a core of orange, undigested, and about the size of the end of a finger, which probably occasioned the convulsions.

Art. X. *Remarks on Scurvy, with a Case.* By J. Pancoast, M. D.

Scurvy, in its most aggravated form, is a disease with which, in the United States, we are fortunately but little acquainted. The usual concomitants for its production, such as abject poverty, famine, impure air, constant exposure to wet and cold, deteriorated food, confinement to salted provisions, the paucity of vegetables and good water are seldom or never met with in this country of sufficient intensity or duration to produce this malady. Our mariners, however, occasionally return with it from sea, when they have on long voyages

been subjected to unaccustomed privations and exposure; but in these cases it is usually a moderate affection, seldom extending beyond the gums, and perhaps never presenting the melancholy picture of that ulcerous and hæmorrhagic condition, and almost living putrefaction described by the older writers. They are likewise, when taken from ship-board, commonly soon cured by the united efforts of good nursing, regimen, and medical care.

It is not, indeed, unusual to meet with diseases of the gums, which may be considered as slight local affections of this kind, among old persons in the lower classes of society, who, in addition to an inactive mode of life have been habituated to the use of gross indigestible aliment; and in some instances among the rich, who, besides leading a sedentary life, have pampered their appetites with rich and highly spiced viands beyond the degree which their digestive organs could sustain. In these instances the breath is loaded with fetor, the individual is incapable of much exertion, the gums are found florid and spongy, bleeding on the slightest friction, shooting up in fungous growths, or shrinking round the alveoli, when the teeth are found to vacillate in their sockets, and are liable to be lost. These cases, if we are not greatly deceived, are met with more frequently in women than in men. The term scurvy is often improperly applied by persons out of the profession to indicate any scabby or scurfy affection of the skin, and which, according to Good's derivation, appears to have given origin to the appellation. That writer supposes it to be derived from the German compound *schar-bocke*, aggregate or cluster-pox, *scharf-pocke*, sharp or violent pox, or *schorf-pocke*, scurf or scurvy pox, which has been latinized into scorbuticus.

From the infrequency of the severe forms of this disease, its afflictive character, and oftentimes melancholy termination, I have thought a few observations in respect to its nature and history, and the relation of a case which came under my care, might not be altogether uninteresting to the readers of this Journal. The unparalleled improvements which have been made during the last fifteen or twenty years in the theory and treatment of diseases does not appear to have been extended so as to completely elucidate the nature of this affection. This arises, no doubt, in part from the comparative rarity of its occurrence. The science of war has undergone such great modifications, that rapid movements and general engagements have almost entirely taken place of the tedious devastating marches and protracted blockades of our ancestors, in which so many thousands fell victims to scurvy, as in the memorable sieges of Breda and Thorn. Navigation likewise has partaken so much of the spirit of the times,

that voyages are now accomplished in one-third the period formerly required for their performance, which, together with the increased comforts of the sailor's condition, has been a means of arresting the prevalence of this scourge, which has checkered with so melancholy a hue the medical annals of the sea. At one period of English naval history, more lives were lost by the effects of scurvy alone, than by the whole combined influence of storms and conflicts with the enemy. Sir John Hawkins narrates that during the twenty years in which he had been employed at sea, he had known ten thousand mariners to die with scurvy. In the memorable four years' voyage of Lord Anson round the world, every reader is familiar with the unparalleled havoc of this disease. One vessel buried three-fourths of her crew with this affection, and another two hundred and ninety-two out of a complement of five hundred men; and at the end of the second year, he had but seventy men fit for the least duty, out of a crew of nine hundred and sixty-one men which he sailed with. In 1726, Admiral Hosier sailed with seven ships to the West Indies, and he buried his ship's company twice with the scurvy, and died himself of a broken heart. Formerly, the deaths from this disease were so common as to amount to eight or ten every day in a moderate ship's company, and bodies sown up in hammocks lay washed about the deck, there not being strength and spirit on the part of the miserable survivors to cast them overboard. On land its ravages were nearly equally dreadful; in besieged towns as before noticed, in crowded prisons, along the cold humid shores of the German Ocean and Baltic, in Hungary where the imperial army was nearly destroyed by it in the eighteenth century, and wherever, in fact, men were subjected to cold and moisture, and a long-continued privation of healthy food, heightened in all cases by depressing passions, inactive habits, and sedentary occupations.

On the early investigation of every disease, it has always been the first step to examine what has been handed down in relation to it from the ancients; and there are always some to be met with, who from the love of learning, or a deep veneration for antiquity, can discover passages in the early fathers of our art, which accord to more or less extent with every disease which may have been produced since the period in which they lived. Thus the σπλην μέγας, and the εἰλεὸς αἱματίδης, of Hippocrates, have been considered by many of his commentators as intended to represent the scurvy, as the enlargement and altered structure of the spleen, and the colics and hæmorrhagic discharges from the bowels have been found frequently to accompany this disease. But when we consider the mild and

genial climate in which he lived, the limited extent of navigation in those days, the active lives of the inhabitants, together with the nearly universal testimony of writers, that it is generally produced and always rendered more inveterate in cold climates, we feel disposed to look to some other quarter for the origin and more perfect description of this disease.

Strabo and Pliny both mention a disease which affected the Roman armies, that would seem to have many characteristics in common with scurvy. The former in an invasion of Arabia, and the latter in an invasion of Germany, (where the disease has since been known to prevail so extensively,) under Germanicus. It was denominated by the physicians *stomacace* and *sceletyrbe*, and was marked by loss of teeth, putrid breath, stiffness of the joints, and ulceration of the extremities, a cure for which was found in the *herba britannica.*

But according to Lind, the first undoubted description of scurvy to be met with, is that given by the Sieur Joinville, in his narrative of the expedition into Egypt, under Saint Louis, in 1260. Here mention is made not only of the legs being affected, but also of the spots, fungous and putrid gums, and feeble pulse, without which the scurvy cannot be said to exist. It is more than probable that this disease must have always been in existence, as the causes of its production have always prevailed in some parts of the inhabited globe. It first became known as the disease of mariners, when the spirit of discovery urged men on to the prosecution of long voyages, with the privations, exposures, and nostalgia usually prevalent on such occasions. It first appeared as such in De Gama's discovery of the route to India by the Cape of Good Hope, in 1497, and in Cartier's second voyage to Canada, in 1535. About the same time it likewise began to attract attention as a disease of the land. In Holland, the north of Germany and Denmark, and along the shores of the Baltic, all the circumstances existed necessary to its production in the most aggravated form. The climate was cold and damp, and the low countries, then unprotected by dykes and embankments, were continually subject to overflows, the inhabitants were poor, ill fed, and lodged, and accustomed in the winter season to live almost exclusively on salted fish and meat, and oftentimes damaged grain. The disease was indeed so common from these circumstances, as to have been long known by the name of the Dutch distemper. When, in addition to this the desolation of war came, and men were forced to long marches in inclement seasons, to encampments upon the wet ground exposed to dews and storms, or shut up in towns, in constant service upon the ramparts, dejected and famished, it is not surpris-

ing that its ravages should have been dreadful, or that it should have been considered in consonance with the superstition of the times, a visitation of demons; or by others as a species of lues, with which disease it was then the fashion to consider every inveterate, loathsome complaint as having some connexion. England was also, though to a lesser extent, affected by the same causes, and it there became a common scourge, and so continued, according to Sir G. BLANE, until the general introduction of garden plants as food, which only began to take place in the reign of Catharine of Arragon. Up to this period the common food of the people of Great Britain, was salt beef and pork, with veal and bread, with scarcely any other vegetable production in the winter season; and in the summer, garden vegetables were exceedingly rare and dear, and only used on Sundays or at festivals. It had not then become the custom to lay up hay for the winter season, and cattle were consequently slaughtered in the fall, and the winter was passed without the luxury of fresh meats. Scurvy is at present only known there as a rare sporadic disease.

By the united testimony of writers it may now be considered as a similar disease upon sea and land, susceptible of production in every place where its causes exist, and of being continually endemic in regions in which they always abound, as was formerly the case on the northern shores of Europe, and is at the present time in the latitudes of Greenland which the whalers frequent.

EUGALENUS, one of the early and most voluminous writers on scurvy, and long an oracle to his successors, considered this disease under forty-nine different sections, or as composing so many different species. He introduced as forms of scurvy diseases which had nothing in common with that affection, but that they chanced to occur at the same period, or from somewhat analogous causes, or were benefited by a similar treatment, precisely as was the case within a recent period, when all diseases curable by mercury were considered venereal, and when it was as much the fashion to give that drug, in all cases of suspected syphilis, as it is now thought prudent to abstain from it. In consequence of this, those who were at sea, found in the books of Eugalenus and his followers, a description of the scurvy, differing greatly from what was presented to their view; a discrepancy which they only could reconcile by considering the disease on shore different from that of the sea, and the former was consequently denominated *land scurvy*. At sea, however, it must be admitted, that from the greater prevalence of its causes, it usually occurs with greater malignity. Sedentariness, indolence, mental depression, inactivity, chilliness, dampness, bad water, meagre indigestible diet of

unfermented bread and salted meats, there exercise their direst influence.

It was among the sailors and common soldiers chiefly that this disease prevailed, for the officers and their servants, who enjoy better pay, and consequently more comforts, were mostly exempted. It is not the saline nature of the food alone that produces the calamitous effects of the disease, for the same have ensued where fresh meats have been plenty, as was the case on board the channel fleets of Great Britain, and in the French army of the Alps, when the other causes of its production have remained the same. The experiment has indeed been tried of giving the scorbutic sea water to drink, and all attest its innocence, some even declaring that it was highly beneficial when given in sufficient quantity to act daily upon the bowels. The belief of the contagiousness of this disease has now passed away.

The first indications of scurvy may be considered a pale, bloated complexion, which approaches by degrees to a livid hue, with a listlessness and aversion to any sort of exercise, a sad and melancholy air, but usually without change of appetite, as the patient continues to eat and drink in his accustomed manner. As the disease advances, the patient feels universal lassitude, with great feebleness in his knees, and much breathlessness on making exertions. The blood-vessels in the lips and wherever they are nearest the surface assume a greenish hue. The gums begin to itch, swell, and bleed at the slightest touch. The breath is offensive. Salivation often ensues. The gums become livid, soft, spongy, and finally fungous and putrid and exceedingly painful. The skin is dry and anserine, the pulse small and feeble, and but seldom febrile. In different parts of the body, but especially upon the extremities and chest, petechial spots of an irregular shape appear, from the size of freckles, up to patches larger than the hand. Pains ensue about the joints, and œdematous swellings take place at the ankle, gradually proceeding up the limb. The bowels are in some cases costive, but more usually affected with obstinate diarrhœa, with very offensive discharges. The urinary fluids, in the course of the disease, assume a disagreeable odour and contain much sediment of a black colour. Ulcers appear upon the extremities, old ones break out anew, and former fractures, even of the longest standing, are sometimes disunited. Mercurials speedily excite intense salivation. The ulcers which are formed have a livid edge, and a bloody fungus shoots up from their surface, discharging a sanious coagulated fluid. The slightest bruises and wounds degenerate in these individuals into ulcers of this class. The gums, cheeks,

and bones of the part are sometimes destroyed from the same cause. No escharotic is beneficial in these cases, for the fungus, when once destroyed is speedily regenerated, and compression is apt to produce gangrene. The patient complains of universal pains in his bones, but more especially of a tightness and oppression about his breast, of stitches in his side, and sometimes of severe colics and suffering in his abdomen. The appetite usually continues good until the disease is very far advanced, and the patient believes himself perfectly able to walk, but on rising to attempt it, is affected with giddiness and faintness, and sometimes suddenly expires. Throughout the disease the patients are subject to discharges of blood from the gums, and as the disease advances, to hæmorrhages from the nose, stomach, bowels, and kidneys, and in some rare cases, in jets from the surface of the body. In the last stage, the flexor muscles of the legs are found irregularly hard and shrunken, palpitations of the heart are excessive and distressing, and the slightest motion is sufficient to bring on faintness or death. The intellect, however, is usually unimpaired till near the period of dissolution. Despair of relief, or any mental depression, exercises a baneful influence over the disease; and on the contrary, any pleasing excitement, such as the expectation of succour, or the stir at the eve of an engagement, has been known to have the most salutary influence over their condition.

This is but a hasty sketch of the disease; those who are inclined to investigate it more fully, I would refer to the treatise of Lind, who is unquestionably one of the ablest writers upon this subject. For it is to the period in which he lived that we can most confidently refer, for the description of the inveterate forms of this disease, as the improvements in the countries where it once raged, and the melioration in the condition of seamen and soldiers, have rendered it since, comparatively a most unusual disease. All the dissections of those who have died of scurvy, made by different individuals at various periods, agree in regard to the rapid putrefaction of the body. Most writers have stated the blood to be in a state of dissolution, of a blackish hue, and capable of being evacuated from the body, on the opening of a single vein. The muscles were found soft and flaccid, the bones softened, and with their epiphyses, in the most strongly-marked cases separated, and containing purulent matter in their spongy extremities. The lungs were sometimes gorged with black blood, pus, or serum, and sometimes compressed with false membranes. The heart flaccid and livid, with all its cavities dilated, and containing only dissolved blood. The pericardium and the different cavities of the chest containing serum. The perito-

neum lining the abdomen, and its different processes, as well as the gastro-intestinal mucous membrane, covered with livid spots. The liver and spleen softened in texture, and often highly congested. The mesenteric and many other lymphatic glands tumefied, and sometimes in a state of suppuration. The brain, however, was always found in a healthy condition, as might be inferred from the integrity of the intellectual faculties till near the period of death.

Such is a brief sketch of the frightful symptoms and consequences of this disease, as given by authors, who had the opportunity of studying it when raging in its most exasperated character as an epidemic. In the sixteenth and seventeenth centuries, when we have the first satisfactory description of the affection, it was the fashion to attribute the first cause of all diseases, and this especially, to a morbid condition of the fluids. Writers did not hesitate to state that the blood, during the course of this complaint, was in a state of putrefaction. HARVEY, BOERHAAVE, HOFFMAN, and others, lent the sanction of their great names to this mistaken theory, and we find them speaking of the alkaline and saponary or acid states of the blood, of the lentor and viscidity of one part, and the too great acrimony and thinness of the other, and of the dissolution and putridity of the whole sanguineous mass, as the cause of this disease.

We find some recommending bleeding and mercury, and others objecting to the employment of these measures with the utmost strenuousness; and with the latter we find, the mass of subsequent experience to coincide, except perhaps in sporadic cases, where from the circumstances in which it is produced, the character of the disease may be somewhat different from that of the wide-spread epidemics. In the early history of every science, we perceive that there have existed limits to the discoveries of the most gifted intellects, which their successors, even though possessed of less prodigal endowments, have been able to transcend. Thus NEWTON, great as was his genius and discoveries, did not reveal to us all the wonders of the heavens, which his favourite science now satisfactorily explains, and with the labour of a life did not accomplish more than a ready school boy may now be made to comprehend. Still he as well as the classics of our science, merit the constant praise of posterity, both for what they have themselves accomplished, and for their having indicated the route for their successors to pursue. Whatever their theories may have been, those who had the most extensive practice in this disease, adopted a course nearly similar, and which experience has since mostly justified. The cold, damp residences of the scorbutic were changed for those that were more genial and dry; the

salted, indigestible and innutritious food was replaced with that of an opposite kind, or corrected by the use of vegetable acids and green herbs, and vice versa when the disease arose among individuals living on vegetables and fresh meats, as history proves to have been frequently the case; the gloomy, desponding feelings so peculiar and so injurious to the scorbutic, they endeavoured to dispel; gentle cathartics when the bowels were constipated, and bark, mineral acids, and the various astringents, when they were affected with diarrhœa; wine, beer, cider, &c. and diaphoretic and diuretic medicines with mild nutritious food, composed the treatment. Great reliance was placed upon the antiscorbutic plants, free air and exercise, when the patient was able to go abroad.

Notwithstanding the uniform testimony borne by writers to the almost catholic virtues of the antiscorbutic plants, and such nearly every esculent vegetable was at one time termed, it appears necessary to dissent in a measure from their opinion, or rather to attribute to different causes the benefits which they produced.

In many of the inveterate cases of typhus fever which have been denominated putrid or malignant, such as the jail, camp, hospital fevers, and plague, the blood is often found in a black dissolved condition, and the exhalations of the body are of an excessively fetid kind, and petechiæ even are formed upon different parts of the body. The causes upon which this state of things depends, it is evident enough are different from those which ordinarily produce scurvy. All these symptoms may be excited in a very short space of time, by immuring individuals in situations where the pabulum vitæ, the oxygen of the air, shall not exist in sufficient quantity to depurate the blood. Would any one pretend to say that vegetable food was capable in such circumstances of correcting the noxious state of the blood? The production of scurvy depends upon a very different state of things. Its causes are commonly slow and insidious in their operations. Diet and exposure, the two most powerful, are of such a kind as would be likely to irritate the gastro-intestinal mucous membrane, and deteriorate or destroy the function of assimilation. In this way every part of the body would suffer for the want of renovation, the power of the muscles would be weakened, and the capillaries be deprived of that peculiar property by which they circulate the blood, which would consequently be most liable to escape where these vessels were most numerous, as in the mucous tissue and beneath the skin. In malignant fevers, (where the blood is found dark and much corrupted, in the language of the old writers,) which have been rapidly produced by exposure to intense contagion, the disorder

has not commenced in the mucous membrane, and we consequently never find hæmorrhage from any portion of its surface till the disease has existed for a considerable time.

Something more than debility, however, is requisite to produce the characteristic features of scurvy. There is undoubtedly in this disease a vicious condition of the fluids, supposed by some of the best and latest authorities to be owing to a defective chemical composition of the constituents of the blood. What the essential cause of this derangement consists in, it is at present, in the limited state of our knowledge of the ultimate laws of vital chemistry, difficult to determine. Since the days of Hippocrates, whose belief in the existence of a special nutritive principle was long the current doctrine of the profession, the science in this respect has not made any great advancement. Physicians are still unable to determine the chemical nature of that portion of our food which forms the true aliment. It is experience alone that dictates the articles with which the table should be provided. Though we find in the kingdom of nature animals which subsist wholly on vegetables and others that eat only meat, all of which are in the full enjoyment of health, it is found that man, when similarly restricted, invariably falls into disease, and that scurvy is by no means an unusual occurrence. Our systems, it is said, require a greater variety of food, and that this disease ensues from the want of some of the peculiar principles, or the proper proportions of the elements of the blood. However true this may be, the condition of the gastro-intestinal mucous membrane, in which the most important part of nutrition is performed, must exercise great influence over its production. When gastric symptoms and fevers have supervened upon scurvy, its course has always been more rapid and fatal. Instances are very numerous, in which this disease has occurred in the midst of ordinary diet, attributable to an impaired condition of the chylopoietic viscera. We would therefore say, that instead of acting upon the acid or alkaline properties of the blood of the patient, which was supposed to be the cause of the disease, according as they themselves were acid or *saponaceous*, that the beneficial effects of vegetables were much owing to their demulcent or assuaging qualities upon the digestive mucous membrane; for these articles were only found appropriate where the disease had been produced by a salted, indigestible, irritating diet, and which was always aggravated by the use of alcoholic drinks. And in these cases the more acrid antiscorbutics, as scurvy grass, cresses, &c. were found too irritating, and it became necessary to obtund their qualities by the use of the milder salads, dandelion, lettuce, sorrel, and other articles

of the same kind. When the disease arose in a situation where vegetables and fresh meats composed the diet, (of which instances are given,) these antiscorbutics were utterly inadmissible, and it was found beneficial to resort even to salted provisions. In the northern climates, where scurvy grass and cresses have been found most beneficial in this disease, they possess much less acrid qualities than in the temperate regions where they are of less rapid growth.

From the entire history of this affection, as well as from the observations here thrown together, it appears that we may be justified in concluding that scurvy arises from defective nutrition, produced by any cause that shall prevent the assimilation of food and the renovation of the sanguineous fluid by the chyle. Hence the continued irritation of the digestive mucous membrane, by acrid indigestible articles, which moreover are scantily supplied with the material of nutrition, in the ordinary circumstances of its production are sufficient to generate this disease. It cannot be alone the innutritious nature of the food which produces this condition of the system, for it is found that a moderate supply of acid, such as the lemon, cider, or even the sauer kraut of the Germans, is sufficient to prevent its occurrence in situations in which it would otherwise take place.

At the present time there are many surgeons, and even in the British navy, who have never seen a case of scurvy. The navy of Great Britain continued to suffer severely from this affection, till 1795, when at the instigation of Sir G. Blane and Dr. Blair, a full supply of lemon juice was provided, of which it has been since the custom to give an ounce, with an ounce and a half of sugar daily, with the regular rations of each individual. This measure is supposed to have been one of the principal means of protection, that has rendered this disease since the period referred to, almost unknown. The rarity of its occurrence, however, renders it very important that its history and treatment should be familiar to the profession, as otherwise an improper treatment might be employed. Dr. Elliotson observes, "I recollect distinctly seeing when a pupil, a man with scurvy, who had been to one medical man, who had taken out several of his teeth for him, and to another—a very eminent man—who told him it was a case of fungus hæmatodes of the gums."

It is a common observation of mariners, that scurvy seldom affects a crew much until they have been reduced to a short allowance of small beer and water. Captain Cook, who placed less reliance upon the antiscorbutics and antiseptics than most seamen, was able to preserve his men entirely free from scurvy, in his longest voyages, by furnishing them liberally with pure water and sound provisions, by

the avoidance of excessive fatigue, and protecting them against the vicissitudes of the climate, and causing them to observe the greatest attention in respect to cleanlinesss, and preserving their minds by various pastimes in a state of cheerfulness. The success of these measures certainly show the importance of preserving the chylopoietic viscera in a healthy condition, and of preventing undue excitement in the digestive mucous membrane. His men likewise had a good supply of fresh meat and sauer kraut.

Sir Francis Milman mentions the cases of two females in the country who were affected with scurvy, from being confined to a diet of bread and tea, after being accustomed to better food. Facts of the same nature have been witnessed in this city. An individual who was restricted by a distinguished physician of this place, to a protracted course of vegetable diet, for the cure of hepatitis, displayed finally many scorbutic symptoms, which disappeared on the resumption of better food.

The following may be considered the common course of the invasion of scurvy; the blood from the deficient assimilation becomes impaired, necessarily contains a less proportion of fibrine, is unable longer to repair the detritus of the different portions of the body, and universal feebleness and loss of muscular power are found to ensue; the different textures of the body become softened, the lungs are unable to effect the decarbonization of the blood, the breath becomes putrid, the heart is unable to circulate the blood with its usual force, and the sanguineous capillaries allow their contents to exude both on the surfaces and in the interior of the body, so as sometimes to produce excessive hæmorrhages; ulcers break out on the lower extremities, old callus is dissolved, the gums become putrid, while the mental faculties are usually undisturbed near to the period of dissolution. Such has been its usual course when raging as an epidemic among bodies of men; and such, with little variation, it is found in those sporadic cases where it has occurred on land, and under circumstances, according to the account of authors, in which it could scarcely have been expected.

There is an affection sometimes met with, supposed to be a variety of this disease, characterized by many of the peculiarities of the latter, but with a greater predisposition to hæmorrhagic discharges. This affection is described by Werlhoff and Huxham, and has been denominated by some *acute scurvy*, or *hæmorrhagic scurvy*. The latter says*—

* Letter to Dr. Lind.

"I find this disorder chiefly among those who drink heavy fulsome malt liquors, such as we generally have in this country, who eat very few vegetables, and live mostly on flesh and fish, that lead inactive lives, and indulge too much in ease and appetite. Many of our sedentary tradesmen very often fall into it, when they constantly drink the gross ale and beer of this country, and live chiefly on fish and salt provisions. On the contrary, the active, laborious husbandman, who drinks chiefly cider, eats much herbage, fruits, &c. and breathes a free open country air, seldom or never is affected with it.

"I have lately met with two scorbutic cases, which I beg leave here to send you.

"A young clergyman, by intemperance, great irregularities, and a very sedentary life, contracted a highly scorbutic state of body, with some degree of jaundice. He had spongy, bleeding gums, a most nauseous breath, a great number of pustules, and of black and livid spots all over his body, particularly on his arms, thighs, and legs. His legs were swelled, and on one of them was a sordid sanious ulcer. He had frequent tormina, and now and then bloody stools. The abdomen grew hard and tumid; he breathed with difficulty on the slightest motion, and sometimes fell into a *deliquium*. He bled often profusely from his nose, and many days before his death a bloody *ichor* leaked continually from his gums and mouth. But what is very singular, and for which I mention his case was, that three or four times a small stream of blood, not much bigger than a large horse hair, burst out from the sound skin of his arm and hand, which squirted out to the distance at least of two or three feet, and was with difficulty restrained by a very able surgeon. He stunk so much before he died, that the last time I visited him I could scarce bear the stench of his chamber, though not a small one.

"The other was a gentleman of fortune and family, who had long indulged to the utmost intemperance, and yet scarce used any exercise, seldom going abroad, even in his coach, above four or five times a year. He always delighted in very high-seasoned meats; and in a very astonishing manner, for two or three years before his death, would frequently swallow large quantities of the common volatile salts, as other people would candied carraways. The consequence was a hectical disorder, a vast eruption of pustules, black and blue spots and *vibices* all over his body, which caused a constant and intolerable itching, and by scratching continually, he tore his skin in a most shocking manner. He lost every tooth in his head, and his gums were destroyed and wasted quite to the jaw bone. He had always a sallow, and sometimes an icteric colour in his face, breast, &c. His urine was in small quantity, and exceedingly high-coloured, as if some portion of blood and soot had been dissolved in it, with a great greasiness on the top, and sometimes a film of all the colours of the rainbow. His legs swelled considerably, his *abdomen* became very tense, and his breath short. His breath was very highly offensive, and his tongue always foul. He was often seized with sudden and great faintness. He at length died in the highest degree of *marasmus*, having his nose and knees bent, and fixed together like a crooked skeleton, for some weeks before his death. He, indeed, lived a year or two longer than I thought he could have done, under such a highly scorbutic state; but I am persuaded, that his drinking very freely of the finest wines, and taking largely of the antiscorbutic juices, greatly contributed to prolong his life. He was upwards of sixty when he died."

Such cases happily are rare; one, however, having much analogy with the above, has lately occurred in the course of my practice, which I shall here detail, leaving it to the judgment of the profession to decide in regard to the propriety of classing it as a case of scurvy.

Some writers have been desirous of considering the abdominal affections, such as diarrhœa, dysentery, &c. as supervening diseases, but Broussais and many of the most authoritative pathologists look upon them as the characteristic terminations of the disease.

M. B. a cabinet maker in this city, emigrated three years ago from Ireland, has always been in comfortable circumstances, and is about thirty years of age. He was of a robust frame, fleshy, and had been throughout his life a very healthy man. For the last three months he had scarcely ever tasted salt meat, but usually took at his breakfast a tea-spoonful of salt. Fresh beef, veal, and poultry were the staple articles of his food, and he was noted for eating large quantities of bread, with a scanty portion of vegetables. Common beer was his favourite drink, of which he was in the habit of taking a pot daily. He has always confined himself closely to his shop, to which he lives next door, scarcely ever took a walk or ride, and usually spent his Sundays in his bed-chamber. He says he never takes medicine, and has not for many years been sick, though for several months past his cheeks have been growing pallid, and assuming a flabby look. I saw him first, May 22d, 1831.

He had for more than two weeks previous, and without any assignable cause, been affected with hæmorrhage from the gums and fauces, entirely without pain, but with a sensation of choking from extreme prolapsus uvulæ. He supposes he has spit daily during this time, a pint of mixed blood and saliva, and his shopmates estimate the quantity higher. His appetite, however, continued good, and his secretions apparently natural. He finally became so weak as to be obliged to abandon his shop. I found him with a pale bloated countenance, a pulse a little quick, but very soft and compressible, and hurried considerably on every attempt at locomotion; suffering no pain, but greatly alarmed by the appearance of purple spots, (purpuræ hæmorrhagicæ) some having the appearance of freckles, and others in irregular patches, larger than the outspread hand, over the thighs, arms, and breast. They generally made their appearance at night, changed gradually from purple to blue and yellow, and finally disappeared in two or three days, to be renewed in another portion of the body. The back part of the pharynx and the whole lining membrane of the mouth was of a dark red hue, presenting in two or three places large purple swellings, apparently formed by the effusion of blood under

the mucous membrane. The gums were spongy and exuding blood, from nearly the whole of their surface, and especially round the margins of the teeth. The surface of the body was flabby, drier, and rather warmer than natural. The alvine and urinary discharges natural. Breath very fetid. Directed a gargarism of mel. rosarum, borax and mur. acid.; nitr. mur. acid internally, cider for drink, and vegetable soup.

24th. The inflammation of the fauces much reduced; feels a little stronger. But the oozing of the blood round the teeth still continues, and within a few hours has increased. Directed a thick decoction of flaxseed, with alum as a gargle.

25th. Seems to-day a little improved and less dejected. His appetite continues as good as when he enjoyed the most perfect health. The bleeding however continued round the teeth during the day, and several times from the nostrils. It broke out at midnight from the gums with much force, continuing to bleed till 9 A. M. The purple spots still continue to appear, though in less numbers. Directed to-day a dose of Epsom salt, and after its operation, pills of gum catechu, containing a small portion of sulph. quinine. Cider to be alternated with porter as a beverage. Oranges and lemons to be used ad libitum. Allowed beef tea.

26th. Does not seem quite so well as yesterday. Feels more debility. At night got no sleep. The bleeding was renewed about midnight and continued till near morning. Several ounces of blood were discharged, which appeared to coagulate, accompanied with much saliva. Applied with a pencil round the margins of the teeth from which the blood chiefly flows, a solution of the caustic, a drachm to the ounce. A slight eschar, when formed, controlled the bleeding, and seemed to diminish the excessive fetidity of the breath. The gums are very soft and painful, and are ruptured by slight pressure. Feels little inclined to eat—pulse weak and feeble, with great palpitation at his heart. Directed bark and serpentaria, with elixir vitriol. Beef tea and fresh meat soups. The purpuræ appear in increased numbers. A piece of cork to be kept between the teeth, in order to prevent the effects of suction.

27th. Hæmorrhage for the third time renewed about midnight. Yesterday afternoon oozed almost constantly through the slough produced by the caustic, notwithstanding the use of powerful astringents. Twitching and spasms of the muscles very evident, mental faculties undisturbed, though he is weak, fainty, and dispirited. Care is taken to keep the room well ventilated, and at a pleasant temperature. Huxham's tinct. bark, ʒi. three times a day, alternated with mur. tr. iron.

Port wine sangaree to be taken when he desires it, in alternation with his other drinks. Supposed to have lost during the night four or five ounces of blood. The purpuræ have again made their appearance. Discharges from the bowels dark and fetid, with a greasy, viscous appearance, like that of vitiated bile. Dr. W. E. Horner in consultation. As the patient had lived much on fresh meat, directed a little table salt to be taken occasionally in solution. Powdered Alep. galls, to be blown on the gums and a saturated decoction of the same to be held in the mouth. Considering the origin of the disease to have been depraved action of the chylopoietic viscera, directed a small dose of calomel, in order to excite the action of the liver. Salt bath to his feet.

28th. Feels a little stronger, moves with more activity, though fainty on setting up. Bleeding renewed at midnight as usual—found considerable difficulty in arresting it; more purpuræ continue to appear. He takes port wine, porter sangaree, and cider, with gingerbread dissolved in them occasionally. Bowels not yet open; directed another small dose of calomel this morning, to be followed with a solution of Epsom salt. The powder and decoction of galls to be continued. Iced vinegar and water to be held occasionally in the mouth.

29th. Bleeding renewed again last evening, which we succeeded in arresting, by the use of galls as before, and coagulating the blood around the gums with lunar caustic, but without acting upon their tissue. Two black, thick and most offensive discharges have taken place from the bowels. The odour produced emesis; same sort of black matter was discharged from the stomach. Little bleeding from the gums through the day, and but a few small purpuræ have appeared upon the surface of the body. The weather is exceedingly hot, thermometer standing at 87° in the shade. Towards evening, the patient had some fever, with considerable heat of skin and headache. Pyroligneous acid directed instead of vinegar as a gargle, in order to diminish the fetor. The coagula which are allowed to accumulate upon the gums to repress the bleeding, appears to excite considerable pain. The patient complains of no other in any portion of his body.

30th. General appearance not so good, countenance more dejected, pulse weak, very quick, complains of no pain except that produced by the coagula upon his gums. Slept little during the night. Bloody serum constantly distilling from the mouth, the fibrine of the blood appearing to be arrested upon the gums by the decoction of galls. Urine dark brown colour, evidently containing dissolved blood, supposed to come from the kidneys. The purpuræ continue to appear,

especially round the neck and breast. Has vomited up part of the food he has taken, with black matter supposed to be hæmorrhage from the stomach; continued the use of mild tonics, and nutritious food, such as thin meat soup, calve's-foot jelly, mineral water of the shops to allay the sickness. The same astringent applications to the mouth. The pyroligneous acid enables the patient, by its destroying the fetor of his mouth, to take his food with more relish, and in considerable quantity. Complains of lightness of his head when he sits up. From this period no treatment seemed productive of much relief. As soon as the bleeding was suppressed from the mouth, it made its appearance from the alimentary canal and urinary organs. The pulse grew weaker, quicker, and the epigastric pulsations more conspicuous, which, though, not forcible, occurred over a large surface, as if the heart in its systole, was not reduced to its usual size. The stomach became very irritable, throwing off every thing that was taken, accompanied by a chocolate-coloured discharge, presenting much the appearance of black vomit. This finally was allayed by the neutral mixture, containing acetate of morphia. The discharges per anum were frequent, and consisted of a blackish fluid, containing large lumps of a black, fetid, greasy looking substance, having less the appearance of vitiated bile, than coagulated blood. His throat became sore, and he complained of a difficulty of swallowing. The bleeding was entirely arrested from his gums, and his breath was much less fetid. As his appetite left him, he became delirious, and purpuræ formed in immense patches on the inner part of his arms and legs, and over his breast. As he approached his end, he raved for drink, swallowed large quantities of beer, which was frequently thrown up again mixed with a mass of grumous matter. The black, insufferably fetid grumous discharges increased per anum, till they became involuntary. He was seized with a convulsion, and died a few hours after on the 2d of June.

Autopsy, twenty-two and a half hours after death.—Present, Drs. Horner, Bradley, and Pancoast. *General appearance.*—Body fat and of strong dimensions; the surface flabby and of a doughy feel, (though kept in an ice-box from a short period after death,) pale and exsanguineous, exhibiting a faint bluish tinge where the large maculated patches had formed a few days previously. Those formed shortly before death, retained the same purple appearance they then possessed.

Abdomen.—The muscles, when cut, seemed deprived of blood, softened in their texture, and presenting the brownish hue peculiar to horse flesh. Much adipose matter in the different omentæ, of a straw colour, and less consistent than usual. Purple spots, similar

to those of the surface, appear in various places under the parietal peritoneum and its reflexions.

Stomach.—Of a large size, containing about three gills of a dark chocolate-coloured mixture, consisting of the fluids swallowed, and of blood and mucus, from the internal coats of the stomach. The mucous membrane was very much softened throughout the whole of this organ. A part of that in the great extremity, the size of the hand, was much thickened, and of a bluish colour. The cardiac portion of the stomach was of a yellowish hue. In the other parts of this organ, brown and violet-coloured patches were seen, having somewhat the appearance of those of the exterior.

Intestines.—The mucous membrane of the duodenum was softened and injected, like the central portion of the stomach. The small intestines in a few places presented the same appearance, but were generally of a healthy character. Purpuræ were found on their exterior under the peritoneum. The colon throughout its whole course presented an appearance of the intensest irritation, much like that of dysentery. Its mucous membrane was thickened, softened, injected and puffed up in places by the effusion of dark blood into the cellular tissue below. It was of a chocolate colour in some places, and of a lighter hue in others. It contained a considerable quantity of dark grumous fetid matter, mixed with lumps, consisting of whitish coagulated lymph and black blood. Some of these fibrinous masses had the appearance of a hollow tube of false membrane. The mucous membrane of the rectum presented the same appearance at its upper portion, and contained some of the fibrinous masses of the colon. The mucous membrane of the colon presented in some places a dry polished appearance, as if all secretion had ceased.

The *Bladder* presented purple spots, both on its outer and inner surfaces.

The *Liver*, natural in its size and external appearance; almost entirely bloodless, much softened in its texture, and of a little darker hue internally than natural. The gall bladder filled with mucus coloured with bile.

The *Spleen* of a moderate size, and more consistent than it is usually met with, containing none of the grumous fluid commonly found in it.

Kidneys.—The left exhibiting in its pelvis some appearance of extravasated blood. The right, when cut open, presented throughout a dark appearance, owing to the presence of black blood. In the pelvis it was found in clots of considerable size of a black colour,

under the lining membrane, which was raised and distended by them. Their texture was softer than natural.

Thorax.—Lungs large and healthy. A moribund congestion had taken place in the posterior part of the left lung. The heart and vessels, including the venæ cavæ, were nearly destitute of blood. A little serous blood only was found smeared over the internal surface of these organs, which in other respects presented nothing unusual. The heart was much softer in its texture than it is commonly found. The blood met with in this dissection was not supposed to amount to more than ten or twelve ounces. The hæmorrhage evidently was the immediate cause of death.

ART. XI. *Case of Diffused Femoral Aneurism, for which the External Iliac Artery was Tied.* By VALENTINE MOTT, M. D. Professor of Surgery in the College of Physicians and Surgeons, New York.

THE external iliac artery has been so repeatedly tied with success, that perhaps, the only interest attached to this case is the obscurity which attended its diagnosis. Whilst the leading features of its history, as well as the condition of the tumour, and the absence of some of the most prominent symptoms of aneurism were strongly indicative of the presence of matter, the situation of the wound and the location of the swelling, induced me to suspect the existence of the last-mentioned disease.

Not the least pulsation could be felt, and it was not until *visible motion, communicated to the hand by the tumour, and the cessation of it on compressing the artery above,* were observed *whilst viewing it obliquely,* that I could form any opinion upon the nature of the disease. This, together with the situation of the cicatrix and pulsation communicated through the stethoscope, decided, in my estimation, its aneurismal character, and determined me on tying the vessel. The result of the case will show that opinion to have been correctly founded.

Charles Fordham, aged 13, came under my care April 23d, on account of a tumour of his right thigh. The history given of it by the parents of the lad is as follows. On the morning of March 18th, while he was at school, a pen knife slid off the desk at which he was sitting; when clapping his knees suddenly together, to save it from falling, the blade pierced his right thigh, a short distance above the

knee. On withdrawing the knife, it was found to have penetrated to the depth of an inch. Little or no blood escaped from the wound. Soon after the occurrence of the accident, he walked home, a distance of about twenty rods, but was so faint as to be obliged to stop twice on the way. In the afternoon the thigh became painful, and was uniformly swelled. It continued gradually to enlarge for about a week, at the end of which time a throbbing sensation was felt throughout the thigh, and an obscure pulsation was *thought* to be occasionally perceived near the wound by one of the attending physicians, who expressed his belief that the femoral artery had been opened. Both the throbbing sensation and the supposed pulsation, however, subsided in an hour or two, and chilliness, followed by fever, supervened. The pain in the thigh was aggravated, and the boy complained also of severe pain in his back.

An abscess was now supposed to be forming; accordingly poultices were kept constantly applied to the thigh and purgatives occasionally administered.

Under this treatment the swelling progressively increased until the end of the third week after the accident, when it became softer and appeared to be subsiding. In the mean time, chilliness and fever at intervals returned, and the pain in his thigh and back continued; to relieve which anodynes were freely given. The tumour again increasing, the lad was brought to this city, and placed under my care.

At my first visit, April 23d, I found the patient much emaciated, and complaining chiefly of numbness, alternating with a burning sensation in his foot.

The thigh was enlarged to nearly twice its natural size, being occupied by a tumour which extended from the inside of the knee to the groin. It was most prominent in the middle of the thigh, where it was also softer than at the circumference. The integuments covering the tumour were nearly of their natural colour, but œdematous.

The leg and foot were in the same condition. The cicatrix showing where the knife had entered, was situated directly over the point at which the femoral artery perforates the triceps adductor muscles.

Fluctuation could be distinctly felt in almost every part of the tumour, but after the most careful examination, not the slightest pulsation could be detected either in the tumour or in the arteries of the leg. Pressure made upon the artery at the groin had no apparent effect upon the size of the swelling.

Under these circumstances I had determined to puncture the tumour, and in the event of its being aneurismal, to tie the external iliac artery, as the extent of the tumour precluded an operation below Poupart's ligament.

But on the following day, a very feeble motion was perceptible in the hand, when firmly placed upon the tumour and viewed obliquely, which ceased upon compressing the inguinal artery.

On visiting the patient the next day, the very visible motion communicated to the hand, especially when placed over the cicatrix, and the evident pulsation in the tumour, conveyed through the stethoscope, decided me in the opinion of its being an aneurism and upon tying the artery.

The operation was performed at 5 o'clock, P. M. 25th April, with the assistance of Dr. VACHE, and in the presence of several of my medical friends, according to the method recommended by Sir ASTLEY COOPER, which has been so frequently executed by myself and others, and the manner of doing it so well known, that to specify the steps of it is unnecessary.

The limb was enveloped in cotton wadding as is usual, and the patient put to bed. ℞. Sol. sulp. morph. gtt. xvi.

26th. Passed a better night, his mother thinks, than before the operation. Pulse 128. Says he has less pain. Foot and leg of a natural temperature. For some time before the operation he suffered from a burning sensation in the bottom of the foot, which was relieved by wetting it frequently with cold vinegar or applying to it a bottle of cold water.

This sensation left him soon after the operation, and at present he says there is only a sensation of numbness, or as though the foot was asleep.

In the evening, being restless and uneasy, took his usual dose of forty drops of laudanum.

27th. Says that he feels better than before the operation—had a comfortable night. Bowels being confined, took a dose of ol. ricini, which operated three times—pulse 108—skin natural—foot of natural temperature—tumour of the thigh visibly diminished—upon the more prominent part of it the skin appears wrinkled.

28th. Diminished the quantity of anodyne a little—passed a good night—feels no pain—pulse 118—limb naturally warm.

29th. Is very comfortable—took less of the anodyne last night—bowels open—pulse 112—tumour evidently diminished—limb naturally warm—upon looking at the foot, discovered a blister on the under part of the ball of the great toe, about the size of a dollar, with a

little redness around the margin. Passed a lancet into it and evacuated the water.

30th. No more vesications and no spreading of the first. Removed the cuticle to the full extent of its detachment, and to my great grief, found it below livid and cold. The foot and toes naturally warm—slept well and feels better than yesterday—pulse 120—bowels open—directed him some Madeira wine in his food and drink, and to apply over the livid part frequently in the course of the day, some warm bals. Peru.

Eight P. M. Has taken more food and with an appetite—livid spot less in size than in the morning, and evidently has resumed a natural warmth. Directed to continue the same means as in the morning, with the anodyne at bed-time if necessary.

May 1st. Passed a good night and feels better than yesterday—pulse 128. The bottom of the foot appears the same as last evening. At a small point near the extremity of the great toe, and at the under part, the cuticle is detached about the size of a shilling, but the subjacent integument is of a healthy red colour—foot and leg of a proper degree of warmth. To continue the same treatment.*

2d. Was somewhat disturbed in the night by a noise in the house which prevented sleep—complains of no pain—pulse 120—bowels open—no change in the foot—same application to be repeated.

3d. Says he has a more natural feeling in the foot and leg than before the operation—he can now feel when the sound foot touches the diseased one, which he could not for some time previous to the operation. His symptoms and pulse the same as yesterday.

4th. Slept very well—appetite good—feels and looks better—pulse 110. Bowels regular—temperature of the foot natural—bottom of the foot better—swelling of the thigh less.

5th. Line of separation of the slough at the bottom of the foot very evident—feels well in every respect—pulse 112—bowels open—urged to take a nourishing diet and to use porter and wine in moderate quantities.

7th. Very comfortable—separation of the slough in the bottom of the foot progressing, pulse 116; œdema of the foot and leg much diminished.

10th. Fourteenth day from the operation, dressed the wound—all healed by the first intention, except the openings made by the

* The mother now informed me, that a bottle of very hot water had been applied to the foot, by the attendants, during the night preceding the day on which the first blister had appeared, which greatly diminished my apprehensions of the result.

ligatures. Removed the three sutures and two of the ligatures; pulse more frequent than usual, in consequence of his feelings being much excited by his father leaving town. In all other respects he is as well as before. Slough at the bottom of his foot rapidly separating, it appears to be no deeper than the chorion—directed to continue the balsam to the foot, and take nourishing diet with porter and wine.

15th. Improving very much in general health—slough from the bottom of the foot came away to day—the granulations look very healthy—wound entirely healed at every part except where the ligature passes—ligature does not yet appear to be detached from the external iliac—œdema of the foot and leg mostly disappeared.

29th. Ligature from the external iliac came away to day—aneurismal tumour about half removed—ulcer on the great toe healed—that on the bottom of the foot nearly closed—general health much improved. Left the city to day for his residence in the country.

Park Place, July 1st, 1831.

Art. XII. *Post-mortem Examination of a patient who died from the bite of a Rattlesnake, (Crotalus Horridus.)* By W. E. Horner, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.

Adam Lake, aged about forty, a robust, muscular man, acting in a laborious capacity, and who, from his own account, was in the habit of drinking from half a pint to a pint of alcoholic liquors daily; on Friday, July 1st, 1831, was in a crowd collected at Fisher's tavern, in Kensington, to witness a popular exhibition of rattlesnakes confined in a cage. Lake being somewhat intoxicated, opened the door of the cage, and allowed one of the animals to creep out and ascend his bare arm; as it was going up, he caught the animal somewhat abruptly by the neck, which immediately struck at him and inflicted two small wounds. In the evening he felt some itching about the bend of his arm, and he rubbed accordingly without thinking of the snake—the itching increasing, he was induced to examine the part, and then he found a little red spot. The recollection of the rattlesnake then occurred to him, and he began to bathe the part in salt water. This not relieving him, he called upon Dr. Elkinton, at which time the whole extremity was swollen to nearly double its size, and was very painful. Dr. Elkinton applied a dry cup over

the part which had originally itched and was bitten; it was near the cephalic vein at the bend of the arm; scarified cupping was also done in three or four places in the same region, and some ounces of blood were extracted by a repetition of the cups; the forearm was also rubbed with the terebinthinate tincture of cantharides, which produced vesication. In the course of the evening, some doses of spirit of hartshorn were administered, and also some table-spoonfuls of the expressed juice of plantain, (Alisma plantago,) and hoarhound, (Marrubium vulgare.)

The next morning, (July 2d, 1831,) the patient was brought to the Alms-house, about 8½ o'clock. He had vomited in the conveyance. He was sensible, and stated that the scarifications had bled much during the night; they were then bleeding freely. The arm, from the shoulder and front of the thorax to the fingers, was swollen to twice its natural size, and was very painful when moved. His pulse was almost imperceptible and thread-like, his extremities cold, he was disposed to cramp in the legs, and his debility very great. His respiration was natural and easy. His eyes were muddy and heavy; his face was somewhat bloated. Feeling the desire to go to stool, he was assisted from his bed for that purpose, but was seized, while on his way, with a general spasm, without foaming at the mouth; being laid down on the floor of the ward, it went off in a few minutes, and he there had an involuntary evacuation from the bowels, of a dark bilious colour. This occurred before I saw him. He received from the resident physician five grains of carbonate of ammonia and an ounce and a half of ol. olivarum.

Sinapisms were also applied to his ankles and breast; he was directed to take liquor volat. ammoniæ, ʒj. sp. vin. dilut. ℥ss. every two hours, and intermediately use ol. olivarum, ℥j.; of the former prescription he took two doses before he died, and one of the oil. Another application of cups over the old scarified parts was made, and the hæmorrhage from them diminished. The extremity was then enveloped in cloths dipped into ice water.

The symptoms continued stationary till 11½ A. M. he then complained of violent pain in the course of the colon, and on taking his last dose of medicine he said he felt sleepy, he closed his eyes, and in a few minutes died without agony or convulsion.

At 4 o'clock P. M. of the same day, I proceeded to examine his body, assisted by Dr. Moore, resident pupil—in the presence of Dr. Morton, prescribing physician, and several of the house pupils and others.

Exterior appearance.—Face much bloated—neck tumid and purple—extremity bitten still swollen, and also purplish in the middle—large patches of red, as is usual in the lowest part of a corpse kept on its back.

Head.—This was the part first opened; the incision of the scalp was followed by the flow of some ounces of black blood, and the cutting of the sinuses of the dura mater by still more, amounting probably in all to near a pint. Much of this blood I believed to have been refluent from the heart and large blood-vessels. The tunica arachnoidea covering each hemisphere of the brain, was raised into a vesication by the deposit of serum beneath, giving it the appearance of a blister. The veins of the pia mater were much injected.

The brain had a healthy consistence; its fine blood-vessels were congested very much, and its cortical substance was of a deep brown. Wherever incisions were made into it, much serum oozed from the cut surfaces. About a drachm of transparent serum was in each lateral ventricle. The cerebellum was in the same condition with the cerebrum, having a healthy texture, but being congested. On careful examination I perceived no where any extravasation of blood in the encephalon.

The medulla spinalis was the last part examined, but it may be proper to state here its condition. Its tunica arachnoidea was somewhat turbid in places, as from some former cause. The veins of the pia mater were congested. The medulla spinalis was of an excellent consistence, exhibiting an indication of perfect soundness by the facility with which it could be torn into an indefinite number of strings from one end to the other.

The vertebral veins were congested with blood.

The thorax presented no derangement of its viscera which seemed to result especially from the cause of death. The surface of the ventricles of the heart was covered with a large white patch, such as is well known to pathologists, and supposed to result from a slight chronic irritation, long continued. There was a hypertrophy of the left ventricle; very little blood was found in the heart; we presumed, from its fluid state, that it had run out on opening the head.

The lungs were healthy.

Abdomen. The peritoneum contained a few ounces of serum. The mucous membrane of the stomach was universally of a red pink colour, from the residence of blood in its fine vessels; upon close examination it was evident that this redness arose from the immense number of blood-vessels in a state of injection; this redness was not

perfectly uniform but varying in its intensity, and being also in streaks following pretty much the course of the wrinkles. There was no mollescence of this coat, no ecchymosis of it, and it contained the articles prescribed in the morning. There was but little gas in it.

The small intestines exhibited in their mucous coat patches of acute inflammation in their whole length, these patches being of a lively red and of various diameters, from six to twelve or eighteen lines, and were in close succession, especially on the jejunum. The latter had its parietes considerably thickened by an infiltration of serum, and it contained a dark bilious matter.

The colon was sound, but contracted to a small diameter, excepting its head, which contained hard fæces.

The liver was of a yellow colour and somewhat enlarged, which I attributed to his habits of life.

The muscles were universally of the colour of a patient who had died from a chronic affection, being of a brownish-yellow instead of a red or brown, as in a robust man. The tumefaction of the bitten limb arose from its infiltration with serum in the cellular and adipose tissue. Owing to the scarifications and cups we were not able to trace the bite of the snake. The blood was universally fluid, no coagulum being seen any where.

MEDICAL EDUCATION AND INSTITUTIONS.

Art. XIII. *An Account of the Origin, Progress, and Present State of the Medical School of Paris.*

[Continued from page 124.]

In the last number of this Journal we presented to our readers a sketch of the rise and progress of the Medical School of Paris, and attempted to show by an enumeration of those individuals attached to that institution who had distinguished themselves as teachers and writers in the various departments of the science, that the old school of that city was in every way entitled to the high renown it had enjoyed throughout Europe to the period of the dissolution of the faculty, which took place soon after the commencement of the first revolution. We announced at the same time our intention of completing in this number our notice of the history of the establishment in question, and of offering an outline of its present organization. It is with the view to redeem this pledge that we lay before our readers the following pages, which will be found by them to form, in some measure, the continuation of those that have already appeared on the subject.

In conjunction with the medical school of Montpellier, that of Paris held for a long time the first rank among the medical institutions of France: for during the period that intervened between the foundation of these two schools and the end of the eighteenth century, several other faculties had been established in various parts of the kingdom. Each of these faculties constituted a branch of an university, which by virtue of powers granted to it by the kings, by parliaments, but more frequently in former days by the popes, possessed to a certain extent the right of framing its own laws and statutes. At the moment of the revolution, or before the decree which ordered the dissolution of all the schools, there existed in France eighteen of those faculties which alone had the power of conferring the honours of the medical doctorate. Of these faculties nine only were in activity or enjoyed more or less reputation. The others possessed merely the name of faculties, and were hardly ever, if at all, frequented by students. The former faculties, independently of those of Paris and Montpellier, were located at Toulouse, Besançon, Perpignan, Caën, Rheims, Strasburgh, and Nancy. The plan of in-

struction, the mode of reception, and the prerequisites for graduation, varied in these different faculties, and were fixed by their respective regulations. In all, however, the candidate was obliged to submit to examinations more or less strict, to furnish certificates of his having studied three or four years, and of having already obtained the degree of master of arts in one of the universities of the kingdom. During the period which was devoted to receptions, and which varied in the different faculties from six months to two years, the candidate was obliged to undergo four or five examinations of several hours duration each, and to present and defend several theses. The expenses of the examinations and theses varied from four to five hundred francs in the provinces, and amounted to more than six thousand at Paris. Besides these sums which were incurred at the period of the license, the pupils paid annual inscriptions during the time of their studies; the price of these varied in the different schools, but did not exceed one hundred to one hundred and fifty francs for the three or four years which preceded the period of examinations.

Besides these faculties, there were several colleges and communities of surgeons, and fifteen colleges of medicine situated at Amiens, Angers, Bordeaux, Chalons, Clérmont, Dijon, Lille, Lyons, Moulins, Orleans, Rennes, La Rochelle, Tours, and Troyes. The former were destined to furnish licenses to surgeons, while the latter were merely incorporate bodies, possessing neither the right to teach medicine nor to confer degrees, but in which physicians, after graduating in one of the nine faculties we have named, were obliged to enter before obtaining a license to practice in the cities in which these colleges were situated, or in the provinces of which those cities were the capitals.

M. Beullac, from whose "Code des Médicins" we have borrowed much of the information contained in the preceding pages respecting the old faculties of France, presents a sad picture of the irregularities and abuses which, in the progress of time, had crept into the mode of graduation. He remarks that every intelligent individual had pointed them out to the public, during more than thirty years. Among these irregularities he cites in a particular manner the two kinds of receptions of doctors *intra-muros*, *extra-muros*, and of *ibiquists;* the denominations of bachelors, licentiates, *aggrégés*, regent, and non-regent doctors, as well as the various prerogatives attached to these different degrees or varieties of grades.

"The internal regime of the medical faculties, which formerly were linked to the clerical order, was not free, in 1790 and 1792, of the character of monachism which had so long distinguished them. Under the pretext of enforc-

ing corporate discipline, (discipline de corps,) the members were called to account and even persecuted for their medical opinions, as well as for their private conduct. From this regime there resulted no doubt some advantages, but it often happened that passions and jealousies concealed themselves under the mask of the order and dignity of the medical profession, with a view to torment those who distinguished themselves above their colleagues by originality of views and brilliant success. Every one recollects the disputes occasioned by antimony and inoculation, by the fact of academies of medicine separating themselves from the faculties, by the physicians of the court, and by surgeons practising medicine. A magistral pedantry, was often united with brilliant talents, and infused into them a degree of ridicule which tended to retard the progress of the art. Besides, if the two faculties of Paris and Montpellier had preserved some severity and dignity in the examinations as well as in the mode of reception, the majority of the others had become so lenient towards candidates, that the title of doctor was sometimes conferred on absentees, and diplomas were occasionally forwarded by mail."

Nor were these abuses and irregularities to be met with only in the medical faculties of the kingdom: they had crept into the various colleges of surgeons, the mode of reception of which presented even greater abuses, and was more arbitrary and less strict than that of the former. The only exception to this was to be found at Paris and in two or three large cities, where examinations were conducted with due attention, and whence issued young surgeons of great merit, and well-informed in the various branches of their profession. A different result could hardly be expected in the provincial surgical schools, considering the number of *communities* that had been formed, and the privilege they had all obtained of conferring licenses. From this there naturally arose a rivalship between them—a desire on the part of the professors to obtain auditors and to see their names attached to diplomas, which occasioned them to be lenient towards the candidate, and to teach at lower prices than was done in the other colleges, with a view to induce young men to give them the preference.

These circumstances could not help throwing discredit at some period or other on these schools, and promoting a gradual extension of the irregularities we have noticed. It is a great error to suppose that cheap schools are beneficial to the progress of medical education, or that by selling instruction cheaper than its neighbour, a college gains, or preserves if it has ever gained, any reputation. Sooner or later other schools, in order to maintain their ground, think themselves compelled to reduce their prices; gradually, with a view to allure students, either to swell the class, and thus obtain pecuniary profit, or to diffuse their renown, examinations become less strict, and degrees are conferred on undeserving candidates;—to say nothing of the fact, that cheapness

attracts to a school many persons, who, from their rank in society, should never be allowed to study, and still less to practise, a profession so honourable as that of medicine. Is it to be supposed that all this can occur without attracting the notice of the intelligent members of the community and even of the pupils themselves, and that the degree obtained in such schools will be as highly valued as those conferred in other schools, where abuses of the kind are not met with? Many facts might here be cited to show that such is seldom the case, and that the more expensive schools are generally the best and are held in the greatest esteem. The very circumstance, that notwithstanding the high price of medical and surgical instruction at Paris and Montpellier, where examinations were conducted with severity and dignity, the schools of these cities retained always a pre-eminence over the cheaper ones of the provinces, is a sufficient proof of the correctness of the views we have here thrown out on this subject.

A few years after the commencement of the revolution, on the 18th of August, 1792, a decree was published and immediately enforced, by which all the universities, faculties, and scientific bodies of the country were suppressed. The ostensible reason of this extraordinary act was, that the system of instruction hitherto in operation was no longer in harmony with the new order of things. From this period, and for some time after, there was no regular reception of either physicians or surgeons, and the most complete anarchy in all branches of the profession, succeeded to the organization heretofore existing. Patents were required, but they were obtained with equal facility by the ignorant as by those who were qualified. In this confusion, the former were as successful as, sometimes even more successful than, the latter, in obtaining practice, and the regular educated physician who had obtained his degree by dint of hard study in the old faculties was placed on exactly the same footing with the empiric and vile pretender who had not studied at all. It is a fortunate thing for humanity, as well as for the progress of medical science and the dignity of the profession, that the necessity of procuring well-informed medical officers for the army to supply the place of a number who had died while on service, was felt by the National Convention. In consequence of this it was determined to establish schools for the instruction of these medical officers, and the celebrated Fourcroy was directed to present a report on the most appropriate plan to be adopted in the establishment of these schools.

Already a decree had been issued, directing the formation of three orders of schools, and thus supplying in some measure the deficiency

in establishments for public education, which was sensibly felt throughout the country. These schools were denominated primary, central, and special. In the latter of these medicine was to be taught together with many other branches, as astronomy, geometry and mathematics, natural history, the veterinary art, economy, antiquities, political science, painting, sculpture, architecture and music. This plan does not appear to have been tried a long time, if it was at all carried into execution.*

After hearing the report of Fourcroy, the convention decreed the law of the 14th Frimaire, an. III. (4th December, 1794,) by which the formation of three schools was ordered at Paris, Montpellier, and Strasburgh, for the reception of officers of health, intended for the service of hospitals generally, though particularly of military and naval ones. The plan of medical and surgical instruction proposed by this decree was complete. The instruction of the theoretical and practical branches was entrusted to eight professors at Montpellier, six at Strasburgh, and twelve at Paris. To each of the chairs was to be attached an adjunct in order to ensure regularity in the lectures. The professors were to be named by the committee of public instruction, on the presentation of the commission. From each district of France a citizen from seventeen to twenty-six years of age was to be selected from among those not comprised in the first requisition. Three hundred of these citizens were to be sent to the school of Paris, one hundred and fifty to that of Montpellier, and one hundred to that of Strasburgh. The committee of public instruction were to determine those of the pupils who were to be sent to one or the other of the schools, and the choice of these conscripts was left with two medical officers in each district. The travelling expenses of the pupils from their homes to the school was defrayed by government. During three years they received a fixed pay. They were divided into three classes, and received the different grades of instruction conformably to the pro-

* As regards the date of this decree, some uncertainty exists in our minds. All we know respecting it is derived from Dr. Johnston's work on Education in France, as it is not found in any of the manuals or codes in our possession. Dr. Johnston states it to have been published on the 2d of November, 1795. But this appears to be a mistake, as in December, 1794, regular medical schools were established, unless indeed the medicine to be taught in these special schools was to form only a branch of general education, as that taught now in the college of France, and was distinct from that for which the schools of 1794 had been established. As, however, Dr. J. had stated the date of the plan presented by Fourcroy to be 1796 instead of 1794, he may have made a mistake in the date of the other.

gress they had made in a knowledge of the art; and as soon as they were thought qualified to practice, (at whatever period of the three years this might occur, and however long they might have studied,) in the hospitals or in the army, notice to this effect was given by the professors to the commission of health, and the pupils were sent to their respective destination. By the decree in question it was further directed, that such of the professors of the suppressed schools as were capable of serving would be reïnstated in their chairs, while provisions were made for recompensing those who in consequence of age or infirmities could no longer continue to fulfil their functions.

This law was undoubtedly good for the time at which it was enacted, and the plan of medical instruction it established, viewing the low state in whichthe science had then fallen, was in many respects entitled to considerable praise. It placed all the schools of medicine under the direction of one administration, thus preventing a recurrence of the many abuses which, as we have seen, had resulted, before the revolution, from the rivalship of the different faculties, and the introduction of persons unqualified to teach. Yet it was far from meeting all the exigencies of the case; and was even on many points exceedingly defective. Thus, it did not specify the manner in which the professorships that would become vacant by death or otherwise, were to be supplied. It did not provide measures calculated to suppress empiricism and quackery, which, since the suppression of all the laws relative to receptions and to the practice of medicine, had increased to a prodigious extent. Neither did it provide regular medical officers for the country and for cities, nor even compel those who were destined for civil or military hospitals, to undergo an examination or be qualified by preparatory studies, or bind them to a fixed period of instruction. Hence the country continued to be infested with quacks of all sorts, while some young men, by dint of intrigue, or by deceiving the professors, gained admission into public establishments, without having had time to obtain a sufficient degree of instruction, and to digest the information they had acquired in the schools. With a view to prevent as much as possible individuals from practising without proper qualifications, several of the Prefects established in their respective departments medical juries, for the purpose of examining every person who wished to practise within their limits. But these departmental institutions, besides having the unfavourable effect of giving rise to a diversity of administrative measures, favoured the introduction of new abuses, arising from the too great facility in the admission of candidates, and sometimes from a much more impure source. So glaring indeed were these abuses, that the minister of

the interior was sometimes compelled to refuse his sanction to some of the *arrêtés* of the Prefects relative to these kinds of receptions.

The necessity for new laws calculated to remedy the defects of the existing system, and to suppress the abuses we have noticed, in the practice of medicine, was soon felt. Accordingly a project was presented to the legislative body and passed into a law on the 11th Floréal, an. x. (1st May, 1802.) By this law it was ordered, that the schools of health should receive the title of schools of medicine, and that all vacancies occurring in the professorial chairs of each of the three schools should be filled by the head of the government, who would choose from among two candidates, one of whom was to be presented by the faculty of the school in which the vacancy occurred, the other by the first class of the National Institute. This intervention of the institute had a double advantage; it tranquillized the government in respect to the intrigues of the schools, which would inevitably have resulted from this mode of presentation, and could not but prove advantageous to the schools themselves, since the first learned body of the country, which by its position was necessarily free from all jealousy and from the influence of the government, could not help selecting candidates suitable in all respects to the duties of the chair, and acceptable to the rest of the faculty.

On the 19th of Ventose of the next year, (10th of March, 1803,) a decree relative to the exercise of medicine was issued. As we shall perhaps have occasion to allude to this decree in some future communication, when speaking of the practice of the medical profession in France, we must content ourselves with stating in this place, that it established two classes of physicians, doctors in medicine and surgery, and officers of health, (officiers de santé,) prohibited the practice of medicine to all but them, and compelled the former to submit, before obtaining a degree and a license to practice, to regular examinations at the schools, after a fixed number of years of study; and the latter to similar examinations before juries appointed for the purpose in various parts of France.

On the 10th of May, 1806, the imperial government issued a decree, by which the establishment of an university embracing all the branches of public instruction, was ordered. This decree was put in force by another, dated the 17th of March, 1808. In virtue of this law, the schools of medicine assumed the name of *faculties*, and retained the organization they had received by the decree of the 10th of March, 1803. Public instruction was confided exclusively to the university, in which were established five orders of faculties, 1, of theology; 2, of law; 3, of medicine; 4, of mathematical sciences,

5, of letters. No school or establishment of any kind for education was allowed to be formed unless connected with the university, and with the authorization of the chief of this institution. This chief was then denominated grand master. Besides him there was a council, a chancellor, and a treasurer. The imperial university was divided into as many academies as there were courts of appeal, at present denominated royal courts, and the faculties of medicine, (at that time five in number, for in 1803 the law of the year preceding authorizing the establishment of additional schools had been in part put in force, and a school at Turin and another at Mayence had been formed,) were constituted as branches of the academies existing in the cities in which these faculties were located. This decree specified the manner in which professors should be named, the prerequisites necessary in order to become a candidate for the degree of doctor of medicine, and many other points we shall have occasion to mention in detail, when treating of them in future communications.

The royal government which succeeded to the imperial, made but trifling alterations in the organization of the university or of the faculties of medicine, excepting, however, in the mode of supplying vacancies that occurred in the latter, and in the government of the institution itself.

It is not our intention to enter here with any degree of minuteness on the organization of the university, as this would lead into details quite incompatible with the precise object of this communication. We cannot omit remarking, however, that the University of France is admitted by almost every individual conversant with its organization, to present a system of instruction very complete in all its parts. Even the English, who, as we all know, are not always ready in doing justice to the French or any other foreign nation, have been forced to admit the correctness of this opinion, and to confess that "the progression followed in the distribution of the various branches of literature; the excellent arrangement of the inferior schools, which leaves little to desire on the head of elementary education; and the absolute necessity of completing a thorough course of philosophical and general study before entering the faculties, merit great and deserved admiration."*

A word on the present government of this institution. The situation of the chief or head of the university, who, as we have seen, was at first denominated *grand master*, was abolished by the king soon after what has been called the second restoration, (15th of August, 1815,)

* Johnston on Education in France, p. 4.

and his duty, as well as that of the council, chancellor and treasurer, were entrusted to a commission of five members, which received the title of royal council of public instruction, and was placed under the authority of the ministry of the interior. By a subsequent ordonnance, all the suppressed offices were reëstablished, and shortly after the powers of the grand master were greatly extended, and the latter was promoted to the dignity of minister secretary of state for the department of public instruction. So much for the executive of the university. As regards the legislative part, or the council, it differs greatly now from what it was originally. Agreeably to the imperial decree by which it was created, the commission consisted of titulary members who retained their situation for life, and ordinary councillors, who were occasionally changed. At first the members of this council were nominated by the emperor, afterwards the vacancies among the titulary members were filled from among the rectors and inspectors—the members being obliged to have been attached to the university during ten years, and to have acted five years as rector or inspector. The ordinary councillors were likewise selected at the first formation of the university, and afterwards chosen by the Emperor from among the inspectors, and also from among the deans and professors of the faculties and the provisors of the lyceums. By another article of this decree it was said, "After the first formation of the Imperial University, the order of ranks will be observed in the nomination of the functionaries, and no one can be called upon to fill a situation, who has not filled the inferior ones." By these regulations none but men well acquainted with the interests and wants of the university could be chosen a member of the council or of the executive, and a professor or other functionary could look with some certainty to a recompense for his zeal and distinguished services, when in the progress of time he would feel desirous of retiring from the fatigues incident to the duties of his office.

The royal government followed, however, a different course. The council was composed of only nine members comprising the director of public instruction and the secretary; and these, as well as the remainder, were nominated directly by the government, and often selected from among individuals, who, from the want of talents and former services to the university, had no claims to such preferences. Some of them, indeed, were only distinguished by their being passive and obedient tools in the hands of the ministry. Were we to present here a portrait of the character and standing of the members of this council, such as it existed in 1828, our readers would be astonished that such men could ever have been raised to responsible and ho-

nourable situations, did they not recollect at the same time that during the administration of M. De Villele, M. Freycinous, and M. Corbiere, talents were not so strong recommendations in the eyes of these ministers as perfect submission to their views. It is true that the ordonnance of the 27th of February, 1821, stated that the members of the council would be selected by the king from among candidates presented to him by the grand master with the advice of the council, and chosen by the latter from among persons most *recommendable* for their services in public instruction. But every one knew what meaning was attached to the word *recommendable*, by the ministry in question. With the exception of M. CUVIER and another gentleman, no member of the council was distinguished by his talents, and even those are not much deserving of praise for the independence of their political character, having both shown themselves ready to bow submissively to the will of the master, and lent their aid to the execution of certain acts which have met with almost universal reprobation, and to the promulgation of principles to which the French nation have lately shown a decided opposition.

The faculty of medicine of Paris forming, as we have seen, a part of the academy of that city, and as such being under the immediate direction of the council and of the minister of public instruction, could not but experience the baneful effects necessarily resulting from a chief such as M. FREYCINOUS; and from a council composed of submissive tools. Without mentioning several more trifling examples of vexation which the school had to suffer on the part of the government, we will merely cite one act, which will serve admirably to show the spirit by which the latter was at the time influenced, and the extent to which it could carry arbitrary measures in order to attain its object. But our readers must first know, that at the period of the restoration, the professors had all been retained. They were, for the most part, men of first rate abilities, and had obtained their chairs after a public *concours*, or had been chosen at the organization of the schools, in consequence of their talents and wide-extended reputation. The government was well aware that bred up during the revolution, these professors were rather opposed to them in their political sentiments, and that many of them were distinguished for independence of character, as well as for undeviating moral integrity; yet they had not given open cause of offence, and without some reasonable excuse, the government felt ashamed to decide on their expulsion.

An opportunity, however, presented itself, in the year 1822, for the execution of this long-contemplated project, and, as might have been anticipated, the government did not allow it to escape.

Seizing as a pretext, a disturbance which took place at the opening of the School of Medicine, in the autumn of that year, in consequence of sentiments expressed by Professor Desgenettes, in an eulogium of the celebrated Halle, who had died during the recess—a subject he had selected for the theme of the introductory lecture to the course—the government, notwithstanding the opposition it experienced on the part of one or two members of the council, (for the latter was not quite so corrupt at that period as it became subsequently, and enumerated among its members a man of rare talents and elevation of character, M. Silvestre de Sacy, who, on this occasion tendered his resignation,) suppressed altogether the faculty of medicine. The royal ordonnance, which announced this unexpected and extraordinary decision, bears the date of 21st of November, 1822, and commenced in these words, "considering that *scandalous* disorders have occurred at the public meeting, (séance solennelle,) of the medical faculty of Paris, on the 18th of November, 1822, and that it is not the first time the pupils of that school have been excited to disturbances that may prove dangerous to public order," "we have ordered, &c."

Here, as it will be perceived, the ostensible cause mentioned is disturbance among the pupils, unless by the word excited, (entrainé,) it was insinuated against we believe the true sense of the phrase, that the professors had instigated them to it, and for this offence committed by the pupils, the professors were unceremoniously expelled from the school. What this disturbance among the pupils had to do with the professors—how it could justify this rash and harsh measure on the part of the administration, no one could guess, and the latter did not volunteer to explain. Since that period, several disturbances have taken place among the pupils, one in particular among those of the College Royal, and yet the professors were not turned out, a circumstance which, taken in conjunction with several subsequent arbitrary acts on the part of the ministry, as for example, the suppression, without sufficient provocation, of Messrs. Cousin and Villemain's lectures at the faculty of sciences, plainly indicate in our minds, that the disturbance in question served only as a pretext for turning out of office men who were obnoxious, and for filling the vacancies thus occasioned, by others whose political views, religious sentiments and flexibility of character were more agreeable to the ministry.

It was reported at the time, that the intention of the government was to establish the school—a plan for the organization of which the minister of the interior was, by the same ordonnance, directed to present, at St. Germain, or some other place, situated at a distance

from Paris. The cause assigned for this was, that the ministry feared the effects of a general insurrection among a class of individuals so numerous as that of the pupils of the faculty of medicine, who if united to those of the faculties of law, science, and letters, might become truly formidable. Be this as it may, the students no longer finding any opportunities of acquiring instruction at Paris, and learning that the inscription fees of the first quarter were returned; moreover, being allowed by the grand master, upon showing certificates of good conduct, to resume their studies in the other schools of the kingdom, either primary or secondary, on the same footing as they would have done at Paris, they immediately left that city and repaired to Strasburgh, Montpellier, &c.

The faculty of medicine of Paris being thus suppressed, as M. Beullac has observed, two laws became necessary; one to supply the place of the decrees of the 14th Frimaire and 10th of May, relative to the formation of the schools; and the other to supply that of the 19th Ventose, of the year 11, concerning the exercise of medicine. But the government did not wait for the enactment of laws, and assuming a power which it did not legally possess, contented itself with meeting the first of these exigencies by means of an ordonnance under date of the 2d of February, 1823. By this ordonnance a new school was directed to be forthwith established at Paris, on a plan somewhat different from that heretofore in operation.

A commission was formed, of which MM. Laennec and Cayol were active members. It was very generally believed, that these gentlemen had the greatest share in the reörganization, or, as some have not unaptly called it, *disorganization* of the medical faculty, and, if some reports are founded, that they contributed powerfully by their manœuvres in causing the suppression of the old school.

By the aforementioned ordonnance, the faculty of medicine of the academy of Paris was constituted of twenty-three professors, and of thirty-six aggrégés, of which we shall speak more fully hereafter. MM. Chaussier, De Jussieu, Desgenettes, Deyeux, Dubois, Lallemand, Leroux, (ex-dean,) Moreau de la Sarthe, Pelletan, pere, Pinel, and Vauquelin—all of whom were of the old faculty—were appointed honorary professors;—while the teachers who retained their chairs, or were lately appointed, were MM. Alibert, Beclard, Bertin, Bougon, Boyer, Cayol, Clarion, Deneux, Desormeaux, Dumeril, Dupuytren, Fizeau, Fouquier, Guilbert, Laennec, Landre-Beauvais, (Dean,) Marjolin, Orfila, Pelletan, fils, Recamier, Richerand, Roux, Royer Collard. The chairs were directed to be sixteen in number, divided as follows:—

1.	Anatomie	Béclard.
2.	Physiologie	Duméril.
3.	Chimie Médicale	Orfila.
4.	Physique Médicale	Pelletan, fils.
5.	Histoire Naturelle Médicale	Clarion.
6.	Pharmacologie	Guilbert.
7.	Hygieine	Bertin.
8.	Pathologie Chirurgicale	Roux. Marjolin.
9.	Pathol. Médicale	Fizeau. Fouquier.
10.	Operations & Appareils	Richerand.
11.	Therapeutique & Mat. Medica	Alibert.
12.	Médecine Légale	Royer Collard.
13.	Accouchemens, malad. des femmes en couche et des enfans nouveau nés.	Desormeaux.
14.	Clinique Médicale	Landré-Beauvais. Récamier. Laënnec. Cayol.
15.	Clinique Chirurgicale	Dupuytren. Boyer. Bougon.
16.	Clinique des Accouchemens	Deneux.

To the medical clinic was attached, as this shows, four professors, to the surgical clinic three professors, while that of accouchemens was entrusted to one professor only.

For several years after this period, no change of any importance was made in the school. In 1825–6 the ministry consulted the châmbers relatively to the propriety of effecting a reörganization of the schools of medicine generally, and to the most appropriate plan to be adopted. A report to that effect was presented by Count Chaptal, but nothing was done. In 1828, the faculties and academies were consulted, and the physicians held a meeting, although not asked to do so, and recommendations were made—but all to no effect, for no change in the organization of the schools was effected, with the exception that M. Dubois was reinstated in his chair of surgical clinic, on the first of May, 1829. Some new appointments were made, to fill vacancies occasioned by the death or resignation of several professors; M. Cruveillier was called to the chair of anatomy, in the place of Béclard; M. Adelon succeeded to Royer-

Collard in that of medical jurisprudence; M. ANDRAL to Bertin, as professor of hygieine, and M. CHOMEL supplied the vacancy occasioned in the chair of clinical medicine by the death of Laënnec.

The ministry Villele, and with it the grand master of public instruction having fallen, and the successor of the latter having shown evidence of a better spirit, no further reform, no violent measures were anticipated, though the friends of the school and of the university generally, perceived with regret that the council was still composed of nearly the same members as under M. Freycinous.

The present communication has already been extended so much beyond our original intention, that we are compelled to postpone to a future opportunity, the account we proposed to offer here of the plan of medical instruction pursued in the school of Paris, and of the mode of electing professors. We must be allowed, however, to hazard a few general remarks on the subject of the University of France, and of the reörganization of the school of medicine, of which we have spoken. The plan adopted in France of placing the whole *corps enseignant* under a single administration, is we believe entitled to much commendation. inasmuch as it affords an opportunity of putting a complete barrier to the intrusion of unqualified pretenders to the duties of teachers, and of enforcing the adoption, in each of these establishments, of a plan of instruction, found by men capable of deciding on matters of the kind, and who have devoted their attention in a particular manner to this important subject, most appropriated to each class of society and to each profession. In no department of public instruction could such a system prove of more decided advantage than in medicine, since all the schools are thereby placed on the same footing—the plan of instruction, the qualifications for graduation, as well as all charges in them are fixed by competent judges, and cannot be deviated from in any way, except with the consent of the constituted authorities—the royal council and the minister of public instruction. By this means the public is assured, that the individuals to whom they entrust their lives, have received a proper medical education; and the schools are prevented from underselling each other, and rendering their plan of instruction less complicated, and the facility of graduation much greater, with a view to attract a large class of students. It is not to be supposed from this, however, that we approve of every law that has been enacted in France—of every decree or ordonnance that has been issued relatively to the organization of the schools, or the practice of medicine in that country. So far from this, we hold that the admission by law of two orders of schools—primary and secon-

dary, of two classes of physicians, doctors of medicine, and officers of health, the first of whom are thoroughly, while the other are only half educated, is open to severe censure. But even as regards these secondary schools, the plan of studies adopted in them is chalked out by the same authorities as direct that adopted in the higher schools, while the nature and extent of the professional services bestowed by the officers of health are in like manner prescribed with as much precision as the case will admit of. Nor would we wish to be considered as disposed to maintain, that this system of concentrating the power into the hands of a few individuals who themselves are placed under the immediate controul of government, is free from inconvenience or danger; for we are too well aware, that the views of a despotic government would be greatly furthered by a system of education which the latter would feel disposed to introduce into the schools of the country. Besides, the events of the last ten years, the suppression of the medical faculty of Paris, the clandestine introduction of the Jesuits into the schools, &c. might be cited as unanswerable arguments against the propriety of such a system. Nevertheless we believe that all these inconveniences do not prove that in many other respects the plan is not admirable, and not deserving of imitation in other countries, where, from the nature of the government, the inconveniences and dangers to which we have alluded could not be feared. We are disposed to think, for example, that advantages would be reaped in this country were such a plan adopted—were the direction of public education placed in proper hands. Is it unreasonable to suppose, that if each state appointed a commission whose duties would be similar, or nearly so, to those with which the minister and royal council of public instruction are entrusted in France, greater benefit would result to the cause of education in this country, than can be derived from the plan at present in operation. Were such a plan, which we believe could not interfere with a suitable degree of liberty, to be adopted, we would see all the charlatan teachers with which our country is fairly deluged—all those cheap schools which have nothing to recommend them, but the low price at which they sell their scanty instruction, and we must be allowed to say, all those petty medical schools where only a limited degree of professional knowledge can be obtained—we would see all these vanish and give way to schools established on a more extensive, rational, and useful plan. While entertaining these views on the subject, however, we are free to confess, that we would be sorry to see, in our own country, so complete a sway exercised by a coun-

cil, commission, &c. over medical institutions, as would lead to the exclusion of fair competition, and to the establishment of monopoly. Let there be perfect liberty in all individuals to establish schools. but while you allow this, let there be competent authorities to decide on the qualifications of those who undertake to teach, and on the plan of studies that must be adopted in the institutions they propose to establish. But we must return from this digression to the main subject of this article—the medical school of Paris.

It was often asked whether there was any necessity for a total reorganization of the faculty. Some having regard only to the state of the school answered in the affirmative; but by far the greater number in the negative. For our parts, judging from all we have been able to hear on the subject of the old, and all we have seen of the new faculty, we are induced to join in sentiments with the latter. The establishment of some additional chairs was doubtless required; but this could have been effected without unjustly turning out the eleven most distinguished professors of the faculty. Perhaps this unprecedented measure would have been excusable, had the choice of the successors of these celebrated men been a happy one, and had some very useful professorships been established. But so far from this being the case, no chair of pathological anatomy was created, although every sound-minded physician concurred in pointing out its utility. Men of eminence like Broussais and Majendie were kept away, while other individuals of the slenderest talents, and heretofore unheard of beyond the limits of a narrow circle, were honoured with a professorial cap and robe, and were thereby allowed to pester such students who had the courage to listen to their soporific nonsense.

But were the selection of new professors good or bad—the necessity of a change indubitable or not, the hour of retribution was destined to arrive. No sooner had the revolution of July, 1830, broken the fetters of despotism in which France had been bound, or at least with which she was threatened—no sooner were the political institutions of the country founded on liberal principles, and placed beyond the arbitrary controul of the king and his ministry, than the voice of the profession resounded from one extremity of the kingdom to the other, demanding justice in the case of the faculty, and insisting on a reform in the school of medicine, and particularly a repeal of the ordonnances of 1822 and 1823, which, it was satisfactorily shown, were the result of an assumption of a power on the part of the executive that had not been allowed to it by the charter—that of suppressing, by means of a simple ordonnance, a law of the state;

for the imperial decree ordering the establishment of the university generally, and of the medical schools in particular, should indubitably be held in that light.

The Duke of Broglie, who at that time acted as minister of public instruction, viewing the great number of petitions that were handed to him on the subject, and influenced no doubt by a sense of justice, appointed, on the 23d of August, 1830, a commission for the purpose of taking the matter into consideration. He charged this commission with making a preparatory investigation of all the questions relating to the organization of the faculty of medicine of Paris, and ordered it to report on or before the 15th of September of the same year. This commission consisted of the following gentlemen:—

Baron Cuvier, member of the Royal Council of Public Instruction, President.

Baron Dubois, Dean of the Medical Faculty.

MM. Dumeril, professor in the same school.
Landré-Beauvais, do. do.
Andral, do. do.
Jules Clocquet, Aggrégé to the Faculty.
Husson, Physician to the Hôtel Dieu, and
Guérin, M. D.

Within the appointed time a report, drawn up it is said by M. Guérin, was handed in to the minister, and in conformity with the advice therein contained, the obnoxious ordonnances of the years 1822 and 1823 were, by an ordonnance of Louis Philip, dated the 5th of October, revoked; the school was placed on the same footing as it was prior to its reörganization; the professors who had been illegally expelled were reinstated; the vacancies occasioned by the death of some among them were ordered to be filled, as formerly, by a public *concours;* the professors who had been appointed at the reörganization of the school in 1823, were, of course, in their turn expelled, but those who belonged to the old faculty, and had been retained at the period in question, together with those who had come in since, and had fulfilled the formalities required for admission by the act of organization of the school, retained their respective chairs; the whole establishment of aggrégés was necessarily suppressed, and finally a new, legal, and complete reörganization of the school was promised.

By this arrangement, MM. Cayol, Landré-Beauvais, Pelletar, Fizeau, Guilbert, Bougon, Deneu, and Clarion have ceased to hold chairs in the faculty, while five of the old professors who were ex-

pelled in the year 1822, MM. De Jussieu, Desgenettes, Deyeux, Lallemand, and Leroux have been reïnstated. Since that event, M. Récamier has resigned his professorship of clinical medicine. The vacancies to be filled, substracting the number of professors who reëntered the school, from that of the individuals who retired, including M. Récamier, amounted to four. In consequence, four chairs were declared vacant; those of surgical pathology, (pathology externe;) 2, medical physics; 3, medical natural history; 4, physiology. These chairs have been successively filled, the first by M. Jules Clocquet, the second by M. Pelletan, the third by M. Richard, and the fourth by M.* . Each of these gentlemen are distinguished in their respective branches, and their success in the several trials of the public *concours* has given general satisfaction. M. Pelletan, in particular is entitled to great credit; for alone of all the professors who lost their chairs in consequence of the repeal of the ordonnances of 1822 and 1823, he presented himself to the *concours* as a candidate for the chair of which he had been deprived, and proved by his success, that though he was indebted for his former elevation to an illegal and arbitrary nomination, he was fully entitled to it by his talents and learning.

* We believe the chair of physiology is now filled by M. Bérard, a distinguished physician and writer of Paris. But as we have not seen an official announcement of his success in the medical journals of that city, we have not thought it right to insert his name in the text.

REVIEWS.

ART. XIV. *On a Peculiar Form of Hæmorrhage from the Uterus.* By ROBERT GOOCH, M. D.*

THE subject of uterine hæmorrhage, though, often discussed, is far from being exhausted; much difference of sentiment still existing as to the best mode of treating it. This arises principally from two causes; namely, 1st, an imperfect acquaintance with what is essential in the uterus itself for the stopping of inordinate flows of blood from its cavity after delivery; and 2d, to the diversity of opinion as to the nature and causes of this discharge, and consequently, as to its mode of treatment.

It is not our purpose on the present occasion to enter minutely into the consideration of uterine hæmorrhage, but to inquire into the peculiarity of that form of it recently described by a distinguished London practitioner; and we think that we shall be able to prove that the *peculiarity* spoken of was the consequence of the neglect of taking advantage of a well-known principle in the economy of the uterus after delivery, to give security against flooding; namely, exciting the "tonic contraction of the uterus."

"Hæmorrhage from the uterus, after delivery," says Dr. Gooch, "is attributed to insufficient contraction of that organ. We infer there is no danger of hæmorrhage if the uterus is contracted; and that the uterus is contracted, if it feels small, round, and firm. *This I believe to be generally the truth;* yet the observing practitioner must have been frequently struck by the little proportion that existed between the want of contraction and the degree of hæmorrhage; having found the uterus bulky without any hæmorrhage, and a profuse hæmorrhage without greater bulk of uterus. Nay, further, I have witnessed a profuse hæmorrhage though the uterus had contracted in the degree which commonly indicates security; and I have ventured to do what is seldom justifiable, separate the placenta before the uterus had contracted, without more hæmorrhage than after a common labour." p. 344.

These are certainly most extraordinary sentiments, and utterly at variance with the best established principles in obstetrics; exhibiting

* See "An Account of some of the most important Diseases peculiar to Women." By Robert Gooch, M. D. London, 1829. Chap. V.

the greatest want of discrimination in regard to the different conditions of the uterus; and the most dangerous deviation from sound practice. Thus Dr. Gooch at once calls in question, or attempts to render doubtful the controlling power of *contraction* in arresting hæmorrhage after delivery, and seems to declare, that it is not always to be relied upon; than which, there cannot be a greater or more dangerous error; since it would lead the young practitioner to abandon the means of producing it, or make him employ such as are neither certain, nor always justifiable.

Now, we must insist, and the fact is never to be lost sight of, that the security of the woman after delivery depends altogether upon the "*perfection*," and the *degree* of that contraction of the uterus called its "*tonic contraction.*" The belief therefore of Dr. G. that he had met with some peculiar hæmorrhages, arises from his not determining the consequences or effects of the different degrees of this effort; and not in reality because there was any peculiarity in the condition of the uterus, as the question, ("what is the circumstance which has such great influence that its presence can cause a moderately contracted uterus to bleed profusely, and its absence can cause an uncontracted uterus to bleed scarcely at all?") would seem to imply. For certainly this question can be answered without having recourse to any operating occult cause, by merely bringing into view, the simplest and most common laws of this organ after delivery; and we are most unfeignedly surprised, that Dr. G. should find it necessary to ask this question; and still more, that he was not able to answer it, *sur le champs.* It is true he has attempted this, but far from satisfactorily, by referring to the state of the circulation, instead of the condition of the placenta and the uterus.

We will therefore attempt the explanation of this apparently puzzling question for Dr. G. In doing this, it will be necessary, briefly, to call to mind the laws which govern the uterus in the expulsion of the placenta, and in the prevention of hæmorrhage, after delivery. First. That a healthy degree of the tonic contraction* is essential to the separation of the placenta; and the quantity of blood poured out after its

* By "tonic contraction," we are to understand the exercise of that power by which the reduction of the uterus is effected, even to its original size or state, after it has been emptied, in part or altogether, of its contents, a power inherent in the uterus itself; its action is uniform and constant, in the normal condition of this organ; and its immediate effect is, to diminish the flow of blood from the extremities of the vessels, exposed by the separation of the placenta, either in part, or altogether, by compressing or folding them up; and expe-

separation, will be in proportion to the degree of that separation, and the force of this contraction. Secondly. That on the degree of contraction, will the safety or danger of the woman depend. Thirdly. That this degree can only be determined by the quantity of blood that may be discharged, after the separation of the placenta, and not with certainty by the bulk of the uterus itself, as this will be necessarily modified in a degree, by the bulk of the placenta and its presence within the cavity of the uterus; for it will be at once evident, that if the placenta be thrown altogether, or even partially into the vagina, that the size of the uterus will be less, by so much; and on the other hand, that this organ will be augmented by the presence of the placenta, in the exact proportion to its size; and all this may happen without the precise degree of contraction being determined. Fourthly. That if the placenta preserve its attachment to the uterus, there will be no hæmorrhage, so long as this state of things remain, be the size of the uterus what it may, or however small the degree of contraction; or if it be partially separated, there will be only a commensurate discharge of blood, even if there be no contraction; and less, if there be contraction. Hence, on the one hand, there may be no hæmorrhage, in the first supposition, though the uterus remain uncontracted; in the second, only a very moderate degree of it; and in the third, the quantity (cæteris paribus,) may be even less than in the second.

Now we think that these several conditions of the placenta and the uterus, will satisfactorily account for the difference or disparity

rience has uniformly proved, that in proportion to the degree and permanency of this contraction, will be the security against flooding; that when it acts in its best manner, (which may be known by its *permanent hardness, and much diminished size,*) the security is complete; and vice versa. That in some cases, this power is lost for a time altogether; or it may be very much diminished; and in either case, the discharge may be great, or even excessive, provided there be a separation of the placenta. That this power may cease to act for a time: the uterus will then be relaxed; and that this cessation of contraction very often does take place, even after the most perfect previous contraction, in which case, hæmorrhage will necessarily ensue; but it may be instantly stopped, by the tonic contraction renewing itself, and all this may happen without our being able to detect the cause. And further; that when this contraction is either reluctant or tardy, it may always be renewed or promoted by frictions upon the abdomen; and lastly, no flooding is ever permanently arrested, but by the influence of this power; and that all the *means* employed for the purpose of arresting uterine hæmorrhage, however diversified they may be, are, and can only be effectual, through the agency of the "tonic power" of the uterus.

which Dr. G. insists sometimes exists between the degree of hæmorrhagy and the want of contraction, without having recourse to any unusual or occult cause operating to this end; and especially, without our abandoning the wholesome and well-tested axiom, that, *in proportion to the tonic contraction of the uterus, and the extent of separation of the placenta, will be the discharge of blood from the uterine cavity.* Nay, we may even include those cases in which there is an *entire separation of the placenta,* as serving to illustrate the position just laid down; and as explaining certain instances of hæmorrhagy in which there is a greater flow of blood under precisely the same degree of uterine contraction, as well as such as are attended with but moderate losses, where there is even less than ordinary contraction; as the degree of bleeding from the exposed surface of the womb, will necessarily be influenced by the extent of such surface. independently and abstractedly—thus, a small-sized placenta, when entirely detached, will expose a less surface than a large one; and consequently will give rise to less hæmorrhage, with exactly the same force of contraction—hence in twin cases, or more numerous products, there will be a greater discharge of blood immediately after delivery, and it will be of much longer continuance subsequently; and consequently a greater risk of hæmorrhage with the same precise degree of contraction.

Therefore, from a knowledge of these facts, we cease to be surprized, while we admit the truth of the observation, that the practitioner may be frequently struck by the little proportion that "exists sometimes between the want of contraction and the degree of hæmorrhage; finding the uterus bulky without any hæmorrhage, and a profuse hæmorrhage, without greater bulk of uterus." For, that this occurs, we readily confess; but at the same time we find no difficulty in its explanation, as may be easily collected from what we have just said; but that it should have challenged the wonder of Dr. G. for an instant, we are truly surprized, as no phenomena are of easier solution, especially to those who are attentive, or are acquainted with the laws of uterine contraction, and its effects, after the expulsion of the child.

But all this would in itself be but a trifle, had it not led Dr. G. to a practice, which, agreeably to his own confession, "is seldom justifiable;" namely, separating "the placenta before the uterus had contracted;" a practice at once rash, as well as dangerous. It is rash because it is unnecessarily incurring a risk—for risk there is, and this very great, if this operation be performed in the atonic state of

the uterus, which Dr. G. himself declares was the case; at least it was before the uterus had contracted. It is true, that Dr. G. says this was done, "without more hæmorrhage than after a common labour." But does not this declaration increase, rather than diminish the evil, since it conveys the idea that this practice is without danger? Is not Dr. G.'s practice in such cases a sufficient guarantee to the young practitioner for following his example? For we must insist, that it is not sufficient to the best purposes of practice, that the plan pursued by Dr. G. was not attended by "more hæmorrhage than after a common labour;" for this was accidental; it is exceedingly hazardous—for we must again declare, and it cannot be too often repeated, that there is no security against hæmorrhage after delivery, but from the efficient contraction of the uterus.

We can readily imagine, that the practice of "separating the placenta before the uterus was contracted," may not always be followed by dangerous consequences—for the irritation of separating the placenta in these cases, most probably caused the contraction of the uterus, and thus prevented the mischief so heedlessly invited by this mal-practice; for certainly it has always been, and always will be bad practice to make a bleeding surface of the uterus, by separating the placenta from it, before the power, by which danger is averted, has been called into action. This practice appears to be the more reprehensible, as Dr. G. assigns no reason, nor relates any circumstance to justify this departure from well-established rules. Now, we will appeal to the candour of any one, and ask, whether a young practitioner would not be tempted to imitate the practice of a gentleman who is so favourably known to the profession as Dr. G.? and whether he would not be leniently dealt by, should an untoward accident follow the adoption of this plan, did he urge Dr. G. as his authority?

Again; there is much ambiguity in the following practical result. Though evidently intended to convey an idea of the uncertainty or uselessness of uterine contraction under certain conditions of the system. Dr. G. observes, "I have observed a profuse hæmorrhage though the uterus had contracted in the degree which commonly indicates security." Now, it should ever be remembered, that no degree of contraction, which is insufficient to prevent or put a stop to hæmorrhage, should be considered as indicative of security. For no absolute reliance can be placed upon the mere *size* of the uterus after delivery to prevent or interrupt hæmorrhage—we must exclusively depend upon the *effect* of the contraction of the uterus, without the least regard to its volume; for it is of no possible moment, however great the bulk of the uterus may be, if no hæmorrhage be present,

and the reverse. Therefore the young practitioner is cautioned against placing entire reliance upon the mere bulk of the uterus—for we have shown above, the reason why hæmorrhage may not be present, though the uterus remain uncontracted; and why it may be profuse under only a certain degree of contraction; and also why that degree, under certain other circumstances, gives security.

Dr. Gooch was led to the observations we have just commented upon, in order to introduce a *novel* state of things in obstetrics; one, as he supposes, that had hitherto escaped the observation of other practitioners, but which we cannot help believing had been noticed from time immemorial, though not perhaps specifically urged.

He says:—

"After delivery, the contraction of the uterus prevents hæmorrhage by occasioning a sufficient closure of the blood-vessels to resist the ordinary force of the circulation. It appears reasonable to suppose, however, that if the force of the circulation was extraordinarily great, it would be able to overcome the ordinary closure of the orifices, and that thus a profuse hæmorrhage might arise though the uterus was contracted in the ordinary degree." p. 345.

In this passage we admit, that Dr. G. states circumstances that actually do occur—namely, that a profuse hæmorrhage may take place though the uterus be contracted in an ordinary degree; provided "the circulation is extraordinarily great:" this we admit, though we cannot yield to Dr. Gooch's explanation of this fact. Dr. G. supposes that the force or velocity of the circulation, overcomes the resistance ordinarily offered by the contraction of the uterus and thus causes flooding. Now, we do not think any degree of force that the circulatory system may possess, is sufficient to overcome the resistance caused by uterine contraction; for the tonic power, if healthfully exerted, is superior to the vis a tergo of the blood-vessels within the uterine parietes. The reasons for such dissent are, 1st, that the vis a tergo, however powerfully exerted, must necessarily be inferior to uterine contraction, or we should never fail to have hæmorrhages from the uterus, as the circulation is almost always very much augmented by the circumstances of labour itself—yet this accident is comparatively of rare occurrence. 2d. Because hæmorrhage seldom or never takes place in cases even where the greatest possible velocity is given to the circulation, as in hysteritis and peritonitis—indeed, in these cases an entire suppression, or at least a great diminution of discharge, is a common symptom in both these diseases.

We have, however, admitted that under a very brisk excitement of the system a more than ordinary flow of blood may take place,

and we still grant this may happen—but we would account for it in a different way. 1st. That when the circulation is much augmented, the whole system may be considered as being in an anormal state; and that under such circumstances uterine contraction may be either directly or indirectly less intense than in a state of perfect health—directly, by not contracting as it is wont to do under favourable circumstances, and thus leaving the vessels completely patulous—indirectly, by the vessels terminating upon the internal face of the uterus being more than ordinarily large, and consequently requiring a more than ordinary degree of force to compress them, but which the uterus cannot exert from its not being in a perfectly healthy condition; and consequently, they will continue to pour out a more than ordinary quantity of blood. 2d. That under such condition of the system, hæmorrhage may take place, though the uterus be contracted in the ordinary degree; for the increase of velocity of the blood, will perhaps more than compensate for the diminution of the calibres of the vessels; therefore, more will be transmitted through these vessels in a given time; and this in some instances may amount to a flooding. But in neither of these cases do we see that *the force of circulation overcomes the ordinary degree of contraction.*

Dr. Gooch relates several cases, which he thinks prove the "peculiar form of hæmorrhage" for which he is contending; but in which we can discover nothing but the most ordinary form of this disease. We shall therefore attempt to sustain our position by analyzing these cases.

He informs us that he delivered a lady of her second child, who previously to labour was much flushed, and "had a very full quick pulse." An antiphlogistic regimen was observed, and she was purged by saline medicine—this diminished but did not subdue this state of circulation, and "it continued in a considerable degree when the child was born." The child was expelled very gradually; "and after the removal of the placenta, the uterus felt in the hypogastrium contracted in the *ordinary degree;* nevertheless, about twenty minutes afterward, there came on one of the most frightful hæmorrhages I ever witnessed; by the introduction of the hand, and the application of cold it was speedily arrested."

We would now ask, in what the *peculiarity* of this hæmorrhage consists? As regards ourselves, we are altogether at a loss to conceive—it certainly could not be in the force of the previous circulation, as this is a common event; yet for a flooding to follow this state of arterial excitement is rare; nor can it be from its taking place "about twenty minutes after delivery," and after "the uterus felt

contracted in the hypogastrium in the ordinary degree;" for this is a very usual occurrence when hæmorrhage happens, as it only requires that the uterus should cease to contract or to relax itself to give rise to a discharge of blood; and every practitioner of any experience has met with the same occurrence, when the labour has not been attended by an exalted action of the arterial system.

Indeed, our own experience would lead us to the conclusion, that hæmorrhage is perhaps less frequent when the system is pretty much excited, than when its action is diminished below the healthy degree: for in this latter state of the system, the uterus generally contracts with less force and certainty than where the pulse may be considered at par, or even above it. And this seems to be proved by the very case related by Dr. G. as there was no flooding immediately after delivery; a period at which it must be supposed that the circulation is more active than it will be twenty minutes after; but at about this period, (of twenty minutes,) the flooding in Dr. G.'s patient commenced and became formidable. Here we must remark that this case is carelessly related—for Dr. G. does not say a word about the condition of the uterus at the moment, though he particularized its condition immediately before. It is true that Dr. G. mentions afterward, that the "uterus which had become firm and distinct, became so soft it could no longer be felt;" but in doing this he effectually destroys the whole *peculiarity* of his case. For in confessing that the uterus relaxed itself, he at once makes the case an ordinary instance of flooding—one that is met with every day. For had the uterus remained contracted during the flooding, as was the case twenty minutes previously, there might have been some cause for wonder, and would have enabled Dr. G. to make out a case of a "*peculiar form of hæmorrhage.*"

We would ask, has not every practitioner witnessed this condition or disposition of the uterus to contract and relax, and this for some time after delivery, and thus giving rise to a renewal and suspension of the flooding? and this where there was no arterial excitement to enable us to account for it on the principles of Dr. G. or to put it in our power to declare that the form of hæmorrhage was peculiar? And it is also known to every accoucheur, that when this disposition of the uterus exists, there is always alternate hæmorrhage and its suspension to a greater or less extent, or in proportion to the degree of contraction and relaxation of the uterus, and this without any necessary correspondence of condition of arterial circulation? If this be so, and who will dispute it? wherein does the *peculiarity* of Dr. G.'s case of flooding consist! Does not the very declarations of Dr. G.

prove, that nothing but the most common form of hæmorrhage was present? Does he not say, that while the uterus was contracted, and this for the space of twenty minutes, there was no flooding? But at the end of this time, he informs us that "the most frightful hæmorrhage came on that he ever witnessed!"

To this lady, Dr. G. was called a second and a third time. In the second, he informs us that the same state of the arterial system was present—she was soon after his arrival delivered; the child was expelled slowly, indeed he says "it could not be expelled more gradually." He cut the cord, and placed his hand upon the abdomen and felt the uterus contracting in the usual degree; yet a few minutes afterwards the blood burst out with prodigious impetuosity. But by the introduction of the hand and the application of cold the hæmorrhage was arrested, but not before it "bleached the face of his patient, and caused her to faint for many days, when she attempted to sit up."

In this case who can perceive any thing more than a common uterine hæmorrhage, and its consequences? But who will not perceive a want of practical tact in its management—for in this case the hæmorrhage would have ceased immediately, had frictions upon the abdomen been instituted.

Upon these cases Dr. G. makes the following remarks:—

"I had now witnessed two labours in the same person, in which, though the uterus contracted in the ordinary degree, profuse hæmorrhage had nevertheless occurred; let me be understood—after the birth of the child, I laid my hand upon the abdomen and felt the uterus within, of that size and hardness which is generally unattended by hæmorrhage; in both instances the labour had been attended by an excessively full and rapid circulation. I could easily understand that a contraction of the uterus, which would preclude hæmorrhage in the ordinary state of the circulation, might be insufficient to prevent it during this violent action of the blood-vessels, and the inference I drew was, that in this case the hæmorrhage depended not on want of contraction of the uterus, but on want of tranquillity of the circulation, and that, if ever she became pregnant again, a mode of treatment which would cause her to fall in labour with a cool skin and a quiet pulse, would be the best means of preventing a recurrence of the accident."

In this quotation it will be perceived, that Dr. G. wishes to establish a principle, which we think unfounded in fact, as well as highly dangerous in tendency. *It is unfounded in fact;* because there never was an instance of hæmorrhage proceeding from merely an increased circulation, and in defiance of contraction—for, though we admit without hesitation, that a very active state of the arterial system may very much augment a flooding, yet we will deny that it will

cause one, independently of an uncontracted state of the uterus; for it is altogether impossible for arterial action, however exalted, as we have already observed, to overcome uterine contraction, when this is exerted in a sufficient degree to prevent a too abundant discharge of blood under ordinary circumstances. Or in other words, that when the uterus contracts with a force that would prevent hæmorrhage under the common condition of the system, that an exalted circulation will not alone produce this discharge in a degree that would constitute an hæmorrhage; though this discharge may be rather more abundant than it would be under the usual state of circulation—and consequently, that a hurried circulation will not alone produce a flooding; and therefore the hypothesis of Dr. G. "that it is reasonable to suppose that if the force of the circulation was extraordinarily great, it will be able to overcome the ordinary closure of the orifices," is without foundation. And we must therefore repeat, that Dr. G. is altogether wrong, when he asserts that the floodings in the patient whose case is related, was not owing "to a want of contraction of the uterus, but to the want of tranquillity of the circulation." *It is highly dangerous in its tendency*—because it diverts the attention of the practitioner from the only proper and safe mode of treating an hæmorrhage from the uterus, by diminishing our confidence in the efficacy of uterine contraction; and thus makes us neglect the best means of promoting it; and by it, securing the patient from danger. Besides, Dr. G. is at variance with himself when at the bed-side; for he recommends the application of the fist to the inside of the uterus, which can only do good by inducing contraction.

We have already remarked upon the vague manner in which uterine contraction is mentioned, and the entire impossibility of conveying a correct notion of the state of the uterus, by saying, that this organ "was contracted to a degree that generally indicates security;" "that it was contracted in the ordinary degree;" "he seldom found it more contracted so soon after delivery," &c.; for the expressions give no definite idea of the degree to which the uterus has reduced itself—the degree of contraction should alone be determined by the effect it has upon the discharge of blood. For if an inordinate degree be prevented, then the uterus may be said to be properly contracted, and not until then; for we must only judge of the degree by its influence upon the bleeding vessels. But above all, it should never be lost sight of, that the uterus may relax itself in a moment, after it has been successfully contracted; and it is owing to this contingency that the floodings recorded by Dr. G. took their rise, and not to the power of a vis a tergo overcoming the tonic contraction of the uterus; and

this by the by Dr. G. acknowledges, without having perceived that it effectually destroyed all claim in his cases to *peculiarity;* for he says, that "the uterus, which had become firm and distinct, became so soft, that it could no longer be felt."

Now, after this admission, will any one seek for the origin of these floodings, in the hypothetical assumption, that they were not caused by the want of uterine contraction, but by the force of circulation? And especially, as it must be familiar to every practitioner, that a relaxed state of the uterus, with a separated placenta, will always give rise to the most alarming floodings; and this, even under the most moderate "force of circulation;" we must therefore declare, that Dr. G. has at least admitted more causes than were sufficient to account for the phenomena—for the relaxed condition of the uterus alone was every way sufficient to this end.

But notwithstanding, Dr. G. attempts to prove a new cause of uterine hæmorrhage; namely, a rapid circulation; and his denying the efficacy of uterine contraction to prevent it, it can be easily shown, that in each instance he has brought forward to support his doctrine, his success in arresting the flooding was owing to the uterus recovering its contractile power, and in no instance to the abated force of the circulation.

In the first case the hæmorrhage was alarming; but "by the introduction of the hand, and the application of cold, the hæmorrhage was speedily suppressed." Now we will ask whether the introduction of the hand into the cavity of the uterus was calculated to abate arterial action, and thus remove the cause of the bleeding? We are every way certain, that this question will be answered in the negative, yet the means were successful—how did they act then, to produce this desirable end? Simply by stimulating the uterus to contraction; and this was also promoted by the stimulus of cold. Why did not Dr. G. employ blood-letting, digitalis, nitre, or some other agent whose operation is to diminish "the force of circulation?" No, he depended, in spite of his theory, upon the well-known, old-fashioned, and efficacious stimulation of the uterus.

The second instance was attended by a similar discharge of blood, and was relieved precisely by the same means Having witnessed two labours accompanied by exhausting floodings, he was determined upon the next occasion to adopt "a mode of treatment which would cause his patient to fall in labour with a cool skin and a quiet pulse." And he informs us, "it was not very long before he had an opportunity of trying the truth of his doctrines; (namely, that hæmorrhage is not owing to the absence of the contraction of the uterus, but to a

want of tranquillity of the circulation,) and the efficacy of his treatment, for about twelve months after her last confinement, she, (the former patient,) called on him to tell him she would require his attendance again."

With the notions he wished to establish in view, he says—

"The plan I advised was this; to avoid fermented liquors; (and pray why not distilled!) to take *meat only thrice* a week; (a goodly provision,) a purgative of salts and senna twice a week; a scruple of nitre three times a day; this she began two months before she expected to be confined, and continued it up to the full time. I saw her when she was expecting her labour every hour, and had the satisfaction to find her with a cool skin, and a soft pulse under 80. She was to lie-in at her own house, a few miles from town; I was to attend her there; for fear I should not arrive in time, the neighbouring surgeon was to be in the house. I was sent for four days afterwards; when I arrived she was not delivered; but I was mortified to find, that since our last interview, her pulse had sprung up, and there was now the old heated skin and hurried circulation, though in a far less degree, and this the surgeon said had been the case for two days. The labour came on, the child was gradually expelled, and after the placenta had separated and was removed, the surgeon had put his hand on the abdomen, and said he had seldom felt the uterus more contracted so soon after delivery; yet within a few minutes there came on a flooding; like what I believed to be the cause, it was trifling to what I had formerly witnessed, and was readily suppressed by a cold, wet napkin flapped upon the belly; but it was enough to produce syncope, and detain us in the house several hours longer than we should have otherwise have remained."

In this case, Dr. G. depended upon the ipse dixit of the surgeon, instead of examining himself into the condition of the uterus—the surgeon may have been inexperienced, or, as is too often the case, may have been careless, as regards the state of this organ. But, if we admit the statement to be true, that it was more than usually contracted for the period, it must be acknowledged that things did not remain long in this posture, for we are informed, that within a few minutes a flooding came on; and though this was comparatively trifling, *yet it was sufficient to produce syncope*, and to detain both Dr. G. and the surgeon several hours longer than was usual upon common occasions. In this history, we have every reason to believe that soon after the delivery of the child, the uterus contracted sufficiently to prevent hæmorrhage, as it is declared, that this did not occur for some minutes after it was ascertained by the surgeon that this was the condition of the womb. Now, if uterine contraction prevented for a time the loss of blood, it is every way probable, that, cæteris paribus, it would have continued to have done so for any longer period, had the contraction preserved itself—but this was not the case, as an alarming flooding came on, and put the life of the patient

in jeopardy; for we must insist, that life is always threatened, when flooding produces syncope, though when compared with former occasions, it may have been comparatively trifling.

Now, is it not more than probable, that the uterus relaxed itself, and thus gave rise to the hæmorrhage? If this be answered in the affirmative, it may be demanded, what gave rise to the relaxation? Dr. G. would answer, a rapid circulation—but this alone, we still insist, can have no mechanical agency to produce this effect, as insisted on by Dr. G. and the only answer that can be given, is to state the fact, that this relaxation frequently takes place, though it may have been preceded by efficient contraction; and also, that contraction may again quickly follow this relaxation; and this without our being able to decide upon its cause; though we may be certain, that the state of the circulation had not the slightest agency in its production. Indeed, the very means Dr. G. employed to arrest it, seems to prove that the uterus had relaxed itself—for *flapping* the belly with a cold, wet napkin could act in no other way, than stimulating the bleeding organ to contraction. And we further believe, that no hæmorrhage can take place, but when the uterus is inadequately contracted; and that the loss of blood will always be in proportion to the absence of contraction, and the size of surface exposed by the separation of the placenta.

Dr. G. says—

"In process of time she became, (the same patient,) pregnant again. She pursued the same plan, with only this addition, that when come within a fortnight of her confinement, she had twelve ounces of blood taken from the arm, and a few days before delivery, eight ounces more. She fell in labour, and as soon as I entered the room, the first thing I did was to feel her pulse; it was as soft and as slow as I could wish. After the birth of the child, and the removal of the placenta, the uterus contracted not more than in her last labour, but not the smallest degree of flooding or faintness took place."

We really congratulate Dr. G. upon the success attending this last case, though we are far from believing that it depended upon the more tranquil disposition of the circulation; for this was only a sign of the more normal condition of the system at large. We believe this, because the excited state of the heart and arteries is an unnatural condition of the system in general, and the want of disposition to contract in the uterus, was the result of this morbid excitement; for when the tone of the circulating apparatus was diminished, the uterus, like the other portions of the muscular system, participated in its reduction, and healthy contraction took place.

We attribute much of the benefit which the patient derived from

a reduction of the system, to a loss of blood, which should have been the remedy in all these cases, and which, had it been employed, would most probably been followed by the same good effect. But Dr. G. does not seem to attach equal consequence to this remedy—it is mentioned only as one of the means pursued, but not insisted on as an important auxiliary; whereas we attribute much to its agency; not by removing the excitement of the circulating system itself, but by destroying the disease, of which this was only a symptom. For we still maintain, that mere arterial vigour is incapable of producing hæmorrhage from the uterus, after the manner declared by Dr. G.; namely, by overcoming uterine contraction; and we must still insist, that there was in this patient some peculiar operating cause which gave rise to arterial action, and at the same time unfortunately, impaired the contractile power of the uterus itself. For had the latter remained uninjured, the former would have been of no consequence —or in other words, would have been insufficient alone to have produced flooding.

Now, this want of disposition in the uterus to contract with sufficient energy and permanency, is very frequently met with, though unaccompanied by high arterial action—this is notorious to every practitioner—in such cases, to what shall we attribute this failure of healthy uterine action? certainly not to a too excited state of the heart and arteries—for we have many times witnessed this failure in the uterus, when it could not possibly be attributed to this cause. But on the contrary, we never more fear an absence of this power, than when the pulse is very weak. The conclusion then is irresistible, that the tonic power of the uterus may be impaired by two very opposite conditions of the circulating system, though the mode of their effecting this be entirely unknown to us. At all events, it cannot be attributed in both instances to the mechanical one suggested by Dr. G. though in both precisely the same condition of the uterus existed—namely, a want of "tonic power," and this was all. For had Dr. G. instituted frictions upon the abdomen, he would have found that the uterus would have been obedient to their influence, and he would have been saved the necessity of introducing the hand into the uterus, and the patient would have been spared much of her blood.

For at last, as we have remarked above, the hæmorrhage was only arrested by forcing the uterus to contraction, and not by the reduction of arterial force; which, were Dr. G.'s hypothesis well founded, would alone have been successful. We may however remark, *en passant*, that had Dr. G. abstracted a few ounces of blood from his

patient's arm when he found her under such high arterial excitement, he would have shown himself a more careful and judicious practitioner than he has done, and his patient would have profited largely by the remedy—not, however, simply because the arterial force would have been abated, for that was only a sign of the condition of the body, but because it might, and most probably would, have removed the condition of the system which gave rise to this excitement, and which was also the cause of the indisposition of the uterus to maintain its contraction, after it had once taken place—for be it remembered that in each instance, the uterus had contracted after delivery, during which time there was no flooding; and in each instance confessedly, it became relaxed and gave rise to hæmorrhagy.

The condition of the heart and arteries described by Dr. G. is far from being common as a constitutional peculiarity, for such it evidently was with his patient; for we every now and then meet with cases of accidental disturbance, without its being attended with any untoward circumstance. It may therefore be looked upon as rare; so rare, indeed, as to make it unsafe to form a rule upon, (as it would only be the exception,) did its treatment require a departure from the common and well-established routine for the management of uterine hæmorrhage. For though Dr. G. seems to manifest an anxiety to render his case remarkable, yet in their management he has not departed from the most common, (but perhaps not the best,) mode of treatment, as we have had occasion before to declare—nay, he neglected one of the most obvious, as well as the most certain remedies in such cases within our reach; namely, blood-letting.

Dr. G. himself seems to be rather doubtful of the importance of his cases, since he dismisses them without attempting to draw from them any conclusion of real practical utility, or even of novelty. He concludes their history with the utmost sang froid, in the following words; "how often a disturbance of circulation plays an important part in uterine hæmorrhage, it is difficult for an individual to know; but *I suspect* sufficiently often to deserve the especial attention of practitioners. I advise them when they meet with patients subject to hæmorrhage after delivery, to notice the state of the circulation before labour, and if disturbed, to employ means to tranquillize it before labour comes on." From this statement, it would seem that this occurrence, by Dr. G.'s own confession, is rare: since he has the reputation of having been largely employed in obstetrical practice, yet he assures us it is difficult for an individual to know how often a disturbance of circulation may play an important part in uterine hæmorrhage. If we take the cases related by Dr. G. for the extent

of his experience in such cases, (and he mentions no more,) this "peculiar form of hæmorrhage" was confined to a single individual —an experience altogether insufficient to establish any important or even safe practical rules, did such cases require a departure from those which have governed practitioners in the treatment of uterine hæmorrhage for nearly a century.

Now, we must repeat, that Dr. G. did not attempt, nor does he propose any novelty in the management of such cases—he only followed the long beaten track. Nor did he, in our opinion, even fulfil the expectations we had of him as a judicious and enterprising practitioner—for he neglected to put in practice the most obvious and important remedies against such a state of the system as he describes. In the three first pregnancies he witnessed in this patient, he literally did nothing—or at least nothing efficient. He neglected blood-letting altogether, he did not enforce a strict antiphlogistic regimen,* nor did he command rest—all of which would be looked upon as essential to the reduction of such a state of the circulation as he describes. In the fourth, it may be difficult to decide whether the observance of the rules laid down by Dr. G. were the cause of the difference of result, or whether the peculiarity of this lady's constitution may have ceased to exist at this time—as regards ourselves, we are disposed to believe that the two bleedings practised before delivery had saved the woman from a fourth flooding; for these are all we can speak of, as the history of the first labour is not related.

His directions for the treatment of uterine hæmorrhage, to say the least, are very hypothetical, and very far, in our estimation, from being the best. But upon this point we will let Dr. G. speak for himself. He says, "my belief is, that when hæmorrhage occurs after the separation of the placenta, the quickest way to stop it, is to introduce the left hand closed within the uterus, apply the right hand open to the outside of the abdomen, and then between the two to compress the part where the placenta was attached, and from which *chiefly*† the blood is flowing."

It should ever be considered as a valuable rule in practice to ex-

* Indeed, Dr. G. does not appear to have had any precise notions of the nature of the affection he describes, or at least of its mode of treatment; for he advises "*during labour, to use cordials sparingly!*" Cordials, under such a condition of the system, in any quantity, in this country, would be looked upon as highly pernicious.

† We would ask for information, whether Dr. G. or any body else, ever knew blood to proceed from any other portion of the uterus, in uterine hæmorrhage, than that which was occupied by the placenta.

cite as little unnecessary alarm as possible; for nothing can justify any degree of it, but the most absolute necessity—therefore, the introduction of the hand within the uterus, should always be left as a dernier resource, and only after less harsh and appalling means have proved unsuccessful. Of this kind are frictions upon the abdomen, and the exhibition of the secale cornutum; for we believe that even the first of these means, if duly and properly applied, will succeed in rousing the uterus to contraction—certainly so far we have *never* known it to fail. And the secale cornutum is now almost universally considered as a powerful adjuvant, if not absolutely successful in itself. Now, the first of these remedies is always at hand, and the second can certainly be commanded without much loss of time; therefore let these be tried before we proceed to the oftentimes unnecessary, and always frightful, expedient of introducing the hand within the uterus. We can with most perfect truth declare, we have not found it necessary to introduce the hand, for the purpose of stopping an hæmorrhage after the expulsion of the placenta, for more than the last five and thirty years of our practice.

Dr. G. proceeds to say, "*by directing the hand to the very vessels from which it (the blood) issues, and compressing them as directed, a quantity of blood is saved. If I may judge from my feelings, the blood stops, in a great degree, even before the uterus contracts;* the hand acts first as a tourniquet, then as a stimulant.*"

To this plan we would offer the following objections: first, the hand cannot, with any possible certainty, be directed exactly to the bleeding vessels, as the placenta has no certain location. Of this, Dr. G. was aware, and has attempted to remove this difficulty, but altogether unsuccessfully in our opinion. Secondly, that if the knuckles were applied to the part from which the placenta was detached, they could not, from the unequal surface which they naturally present, press upon all the bleeding vessels immediately beneath them. And thirdly, because no hand, unless it were one of *monstrous* size, would be equal to the surface exposed by the separated placenta. Therefore, the hand when introduced into the uterus so as to stop an hæmorrhage, can only act as a stimulant, though Dr. G. in trusting to his feelings, inclines to the belief, that "the blood stops in a great degree, even before the uterus contracts." Now this, from the

* If this ever happened, it could only have been when the woman was much exhausted, and the last effort was made by nature to preserve the individual, by producing coagulation. In this case, nature stopped the bleeding, and not the knuckles of the accoucheur. Besides, in such cases, Dr. G. should have appealed to reason and experience, and have totally distrusted feeling.

very nature of things, cannot be. Besides, we may well ask, how the hand within the uterus can act as a *tourniquet!* we cannot comprehend this.

From an attentive perusal of Dr. G's chapter on "a peculiar form of uterine hæmorrhage," we are led to the conclusions, first, that in the cases he has described, there was no unusual circumstance connected with the flooding to entitle it to be called "peculiar." Second, that an attempt at originality, misled him in his practical means, as they were neither the best that could have been devised, nor the most happily executed. Thirdly, that we cannot perceive in the histories of the several cases, the slightest deviations from the ordinary uterine hæmorrhage, if we except the active condition of the circulation, which *perhaps* may have produced the indisposition to contract in a uterus, in every other respect healthy. Fourthly, that in each instance the hæmorrhage was arrested by the agents generally employed for this purpose. Fifthly, in attempting something *new*, he had been made to overlook every thing that was *old* and *common;* or rather to view every thing that was *old and common* in a new light, and this without a profitable end; even perhaps, with dangerous innovation.

W. P. D.

Art. XV. *De L'Influence de L'Estomac sur la Production de L'Apoplexie, d'après les Principes de la Nouvelle Doctrine Physiologique, &c.* Par L. J. R. A. Richond, Doct. en Med. &c. 8vo. pp. 164. Paris, 1826.

To Lallemand we are indebted for the best pathology of the brain. The critical acumen and spirit of analysis with which he has examined the recorded cases of cerebral disease, as well as such as fell under his own observation, have enabled him to deduce a body of doctrine which has placed this branch of pathology far in advance of its previous condition, and worthy of being ranked among the most remarkable results of the physiological medicine. Among other things, we are especially indebted to him for having first pointed out the actual condition of the brain in apoplectic, convulsive, and paralytic affections. He has shown that these affections arise, in a great majority of instances, from an inflammatory irritation, and has thus given to their attendant symptoms their true physiological importance, by rallying them under the general effects of irritation and its consequences. Richond, the author of the work before us, has advanced

one step further. He considers the cerebral disease, of which the apoplectic seizure is one of the consequences, to be produced, in very many instances, by an irritated condition of the gastric organs. Broussais was the first to point out this source of cerebral disease, which he has done however only in a general manner, in the following aphorisms prefixed to his *Examen.*

119. "Inflammation of the encephalon is more frequently the sympathetic effect of inflammation of the stomach, than their cause."

120. "The sanguineous congestion of the stomach, in cases of drunkenness, typhus, and other fevers of bad character, is propagated to the brain, and also to its coverings."

125. "Arachnitis is more frequently consecutive of gastro-enteritis than primary," &c.

127. "Tubercles, cancers, and other organic diseases of the brain, are the products of chronic inflammation of that organ."

128. "All irritations of the encephalon may border upon, if not end in, apoplexy."

The treatise before us may be considered as a sort of commentary on these aphorisms, while it, at the same time, inculcates doctrinal views on the etiology and pathology of cerebral disease, drawn from clinical and autopsic observation, which are both novel in their character and worthy of being candidly examined by the intelligent physician.

M. Serres, (see his excellent memoir in the Annuaire Medico-Chirurg. des Hospitaux, &c.) seems also to have been fully aware of the morbid condition of the brain which leads to apoplectic attacks; but it was really the labours of Lallemand and Rostan which have placed the subject in its proper light, and taught physicians that under the denomination of apoplexy had heretofore been included inflammations of the brain and its meninges; and besides, that the acute phlogistic condition of the different parts of this organ could often be discriminated during life by unequivocal symptoms, with the different accidents that are liable to supervene in the course of this malady. Although our author admits that the symptoms which respectively mark the higher or acute grades of cephalitis and arachnitis are sufficiently distinct, he does not believe their more chronic forms can be distinguished with any degree of accuracy, on account of their often not implicating in any very evident manner the sensitive, intellectual, or moving powers of the system, and that they may even prove fatal by rapid aggravation without being attended by any of the precursory symptoms of apoplexy. The softening, *(ramollissement,)* of the cerebral substance, which is one of the pathological con-

ditions of inflammatory irritation, is considered by M. Rochoux as neither the cause nor the effect of the sanguineous effusion, but rather a concurrent circumstance supervening upon the apoplectic seizure; while our author denies that apoplexy *does* invariably follow this effusion either in or upon the brain; or, on the other hand, that such effusion is found in every case of this disease, in conformity with the received opinion on this subject. M. Serres has shown by a great number of experiments that the former position is unquestionably true, and, in addition, cases may be quoted from Morgagni, Valsalva, Wepfer, Fontana, &c. verifying our author's opinion, and showing, moreover, that compression of the brain is not so prejudical as has been supposed. To prove the latter part of the position, namely, that apoplexies sometimes occur without being attended with any effusion whatever, we can refer to numerous cases recorded by authors, among others, to those spoken of by Casimir Medicus, Hoffmann, Quarin, Rega and Tissot.

From all these considerations the author thinks he has a right to conclude that apoplexy, in a great majority of cases is the sequel of previous morbid alteration, terminating in a softened state of the nervous structure, and that this state is the cause, not the consequence of the effusion, otherwise we should find it occur most frequently on the surface of the organ, where the counteracting compressing force is the least, rather than in the central parts, as experience proves to be the case. From no other view of the subject can we account for the occurrence of intermittent apoplexy, many cases of which are on record, and for the signal efficacy of revulsive means in entirely removing the apoplectic symptoms, by setting up a distant irritation of a given degree of intensity.

Causes of Apoplexy.—Irritation of the mucous membrane of the stomach, by inducing cerebral irritation, is one of the most frequent causes of this disease, and the knowledge of the fact leads to most important practical considerations. Intemperate habits, both in eating and drinking, the free use of condiments and other stimulants, it is thought, favour the production of this disease, not as has been commonly supposed by inducing a plethoric habit of body, and exciting unduly the circulatory functions, but by setting up an inflammatory irritation in the organ to which these ingesta are immediately applied. Hence we find that such persons as live too freely are much disposed to attacks of indigestion and gastric derangement, followed by dizziness, vertigo, and other brain symptoms, which are not unusually premonitory of an apoplectic seizure. It is in the same way that the use of mineral waters and other irritating medicaments, as

emetics, purgatives, tonics, &c. are so often fatal to apoplectic and paralytic patients, namely, by stimulating too severely and constantly the stomach and intestines. This cause of apoplexy was not entirely unknown to preceding writers. It is noticed among others by Baglivi, Barthez Tissot, Hoffmann, and Van Sweiten. Serres, to whom we are indebted for much valuable information on the brain, considers the gastric disease to have been produced by the treatment employed for the cerebral affection. This opinion, while it acknowledges its frequent occurrence, at the same time inculcates the danger of irritating medicines in this disease. Do we seek for the rationale of the gastric origin of cerebral disease? We shall find it in calling to mind a few of the circumstances which occur, proving the intimate connexion that subsists between the stomach and brain, for the performances of the healthy functions of the system. Every one must often have remarked how quickly on taking food the system recovers its wonted tone and energy, from an extreme state of languor and depression caused by inanition, and this too, long before any of the nutritious material could have been absorbed into the system to repair its waste, which could arise in no other way than from the immediate impression made on the stomach, and thence communicated to the brain and rest of the nervous system. Also the decided influence which the state of the stomach with regard to its repletion or emptiness exerts over the mental functions, their force and vivacity, and the almost instantaneous impression which the ingestion of alcoholic drinks makes on the brain before there has been time for absorption to have taken place, all proving conclusively the powerful sympathy which connects these organs.* And further, if we examine what takes place in disease to elucidate this point, we shall meet with multiplied evidence of this connexion. Besides the cerebral symptoms which constantly show themselves in the course of all fevers of a certain degree of force, in acknowledged gastric inflammations, in dyspepsia and other derangements of the primæ viæ, we have hypochondriasis, mania, epilepsy, and chorea, each acknowledged by practical physicians to often have their origin and source in a gastric irritation. Even the milder forms of chronic inflammation of the stomach exhibit shades of mental commotion, the patient becoming cast down, careless, and morose, and if the disease aggravates, these slight deviations of temper are changed into the settled forms of hypochondriasis, or into the deeper ravages of mania. Other instances might be cited and will readily occur to the intelligent physician, but we think the preceding observations clearly establish the author's opinion of the gastric origin of cerebral disease, and enable us to understand why

it is that intoxication, and the too free use of rich food, with other stimulating articles, &c. readily predisposes to apoplectic attacks. This view of the subject also accounts for these seizures being brought on, in very many instances at the time of taking or after a full repast, during a bout of intoxication, or an attack of indigestion, under each of which circumstances the stomach may be fairly supposed to be in a state of irritation or excited action, thence to be repeated in the brain, and finally aggravated into disease.

The author's pathological researches have enabled him to ascertain that the heart and its appendages are as frequently the subject of morbid derangement from its sympathetic union with the stomach as the brain itself, exhibiting all the variety of morbid lesion which irritation and inflammation are known to produce in this organ; but this is not the occasion to enter upon this subject, and we merely mention the experience of our author, to turn the attention of the observant practitioner to the subject.

Treatment.—When we reflect on the effects of cerebral irritation, that it most frequently emanates sympathetically from gastric irritation, and that the slightest stimulations of the stomach even are transmitted to the brain, it becomes evident that we have two important indications to fulfil in the treatment of apoplexy. 1st. To calm the cerebral irritation, and 2d, to subdue the gastric disease in order to obviate its sympathetic propagation to the brain. In order to meet the first indication, we must have recourse to bleeding, both generally and locally, and to the application of ice to the head. The blood may be drawn from the jugular vein, or temporal artery, that the large vessels of the head may be rapidly disgorged, or it may be taken from the saphena vein, for its powerfully revulsive effects. After the first bleeding, which should be copious, if the force and temperament of the patient admit of it, it is better that the after bleedings should be small and frequently repeated, as better calculated to subdue the inflammatory irritation, as this irritation is ordinarily of a chronic character. The use of leeches ought to be had recourse to only after having subdued the first inflammatory violence of the disease, so that their bites may not prove exciting to the brain, or else they should be applied to the anus or thighs, that they may act revulsively as well as detract blood; or finally, what is perhaps better than all, they should be applied to the epigastrium, where they will become in addition, a powerful means of allaying the gastric affection. At the same time, nothing should be put into the stomach but mild diluents and demulcents to calm its irritated condition. Emetics, purgatives, and other stimulants should be wholly abstained

from, as calculated to lead to fatal consequences. In confirmation of this opinion, many cases of apoplexy, induced by the use of these medicines is referred to, which may be found in the records of medicine; and he also recalls the opinion of M. Serres before cited, who attributes the inflammation of the stomach, so frequent a concurrent of apoplexy, to the use of these remedies during the disease. The author also highly disapproves of the application of blisters in this disease, believing them to produce an irritation, which communicates an additional degree of stimulation to the brain, and inevitably adds to the disease. He cites in support of this opinion, the high authority of Baglivi, of Broussais, and of Tissot; and if we may be allowed to place our own limited experience aside of such names, we should declare our implicit assent to the opinion. We are inclined to believe that this practice of blistering in these cases, which has prevailed almost universally for ages, is founded on erroneous views, that it is often highly prejudicial, and can only be resorted to with advantage, under very peculiar circumstances, in the advanced stage of the disease, when the inflammatory erythism has in a great measure subsided.

The very full and faithful analysis we have given of M. Richond's work, will enable the reader to form his own opinion, uninfluenced by us, of its value. For ourselves, we are free to declare, that we consider it one of the *able* productions of the new school, and that its facts and principles ought to be made known to every practical physician. C. D.

ART. XVI. *Cours de Pharmacologie; ou Traité Elementaire d'Histoire Naturelle Médicale, de Pharmacie et de Thérapeutique, suivi d'art de formuler.* Par F. FOY, M. D. et Pharmacien de la Faculté de Paris; Professeur particulier de Pharmacologie, &c. 2 toms. 8vo. Paris. 1831.

IN no branch of medical science have the French made greater advances than in that of pharmacology, especially within the present century; and for this they are principally indebted to the genius and indefatigable industry of the eminent individuals at the head of their pharmaceutic school, among whom the names of ROBIQUET, HENRY, FEE, CHEVALLIER, and many others, are identified with some of the most valuable discoveries and improvements of medicinal agents.

The spirit of enquiry awakened by them has been ably maintained in England, and the periodical journals of that country teem with proofs that her pharmaceutists and chemists are assiduously striving to compete with their neighbours. The work of Dr. PARIS, which was one of the first publications that emanated from the British press, on pharmacology, though defective in many respects, particularly in that portion of it devoted to "the art of prescribing," is an extremely valuable treatise, and has for a long time been extensively known in the United States, where we have no original work on this important subject, embracing the latest improvements, or capable of satisfying the increasing demand for information. It is true that the different dispensatories in some measure supply the place of such a work, but none enter sufficiently into the natural history of drugs. The Pharmacopœia of the United States, recently published, from its very nature does not furnish these details with which it is so absolutely necessary that a practitioner should be acquainted: in saying this, we are far from intending to decry the merits of this important work; on the contrary, we consider the very conciseness alluded to, one of its peculiar merits, and we trust that work will prove a means of accomplishing, what is so much wanting in the pharmacy of this country, a strict uniformity in officinal preparations. We are however still in want of an original pharmacologia, or a companion to the pharmacopœia, which will enter into details respecting the history, adulterations, &c. of medicines. A work of this character, if properly prepared, would be an invaluable present to the profession, and we are happy to see such a publication announced by two of our medical brethren, well calculated to do justice to it.

Among the various works lately issued from the French press, we have selected that of Dr. Foy, as presenting in a small compass, the latest investigations and opinions on the different articles of the materia medica. The author has been a lecturer for many years in Paris on pharmacology, and the present work purports to be an abstract of his lectures, published at the solicitation of his pupils.

The plan he has pursued in execution of this task will be better understood by the following abstract from his prologomena, than by any comments we can offer. He observes that his object is to make known all the simple or compound substances worthy of being employed in the healing art, to indicate their origin, their physical and chemical characters, their adulterations and medicinal properties, with an account of the various doses, pharmaceutical preparation, analysis, antidotes and medical history of each article. These form

the first volume; the second, which completes the work, contains, 1st, Pharmacy properly speaking, or the rules to be adopted in the preparation and preservation of medicaments. 2d, Therapeutics or a synoptical table of diseases and their treatment, and the whole is concluded by some general rules on the art of prescribing, with examples of formulæ.

That the author has not fully succeeded in his undertaking, must be freely admitted; the field is too vast to be thoroughly and properly explored, and the state of our knowledge of the pharmaceutic as well as therapeutic properties of a majority of the articles, is by far too imperfect for the accomplishment of so desirable a result. In the following analysis of the work, we shall merely point out its arrangement, the manner of treating the different subjects, &c. it being impossible, in the narrow compass of a review, to notice such errors as may exist, except they be of such a character as to lead to injurious consequences.

Dr. Foy justly remarks that the study of pharmacology requires the aid of almost every branch of human knowledge, and that to attain a proper acquaintance with it, a good preliminary education is indispensable, especially a proficiency in languages, in natural history, and in chemistry.

We shall not follow the author in his directions for the collection and preservation of medicinal substances, as although they deserve an attentive perusal, there is nothing new or striking; with respect to his classification, however, a few observations may not be superfluous. Nothing is more perplexing in the present state of our knowledge than to give a good classification of remedial agents. In most of the sciences, and more especially in natural history, an arrangement founded on the greatest number of conspicuous and constant characters will best answer the desired end; the difficulty lies in determining what these characters are, and bringing them together in such a manner as to exhibit their affinities in the most obvious manner. This has been in a great measure accomplished in natural history, but the principles which are applicable to that science, wholly fail when attempted in medicine. Here not only the relations of external objects with each other must be kept in view, but likewise their actions and bearings on living matter, circumstances which are not always explicable on physical or chemical grounds; hence the great imperfections and discrepancies, so discernible in all classifications which have been proposed.

Some writers as Ratier, &c. have been so strongly impressed with the almost insuperable obstacles to a systematic arrangement as to

class all remedies according to their alphabetical order. This plan has the advantage of exhibiting in a connected manner all the peculiar qualities and therapeutic applications of each individual article, without those constant repetitions and references so unavoidable in other systems; but however well this may be calculated for a work of reference, it is extremely defective as a general mode of classifying the objects of our research, as we must necessarily lose sight of those physiological and pathological relations between the living body and the remedial agent on which the science of therapeutics is founded. It is in fact a mere *catalogue raisonnée* of drugs, admirably calculated for the pharmaceutist, but not supplying the wants of the physician.

Some of the continental writers have arranged the articles of the materia medica according to their chemical affinities, but this plan is infinitely worse than the preceding, for without affording any instruction as to their therapeutic connexions, it brings together agents of the most opposite character as respects their remedial properties. This classification arose from the idea that all medicines acted solely and exclusively on the fluids of the body, not as on living materials, but by modifying their specific gravity and chemical combinations.

Most of the later classifications are based on the action of medicinal substances on certain organs or tissues, giving rise to the various orders of purgatives, emetics, &c.; this has been followed by the author of the work under consideration, with some variations; he admits four great divisions, *tonics*, *debilitants*, *special remedies*, or such as act on certain parts alone, and *specifics*. These are subdivided as follows.

Tonics are divided into, 1st, tonics properly speaking, including the *bitters*, the *astringents*, and the astringent tonics. 2d. Stimulating tonics, which may be either *general* or *revulsive;* the latter being composed of the *rubefacients*, *vesicatories*, and *escharotics*.

Debilitants he divides into, 1st, general agents, as *repose*, *diet*, *warm baths, and sanguine evacuations.* 2d. Pharmaceutic agents, as *emollients*, *refrigerants*, and *contra-stimulants.*

Special remedies include such as generally act on one system or organ in preference to another, and includes the well known classes of *purgatives*, *emetics*, &c.

His last class, or specifics, is intended to receive such remedies as he thinks are calculated to subdue certain morbid affections by some inherent power in the remedies.

That this classification, and more especially the latter part of it, is extremely defective, must be fully admitted, as from what we now

know of the nature of disease it is evident that we can no longer attribute those secret, mysterious, and specific powers to remedies, with which they have been and are still supposed by many to be endowed. It is now we think amply demonstrated that medicinal substances have no other action on living organs, than those which arise from their causing certain physiological or pathological phenomena. The actions thus excited may be beneficial or the reverse, in proportion as they diminish or increase the organic lesion, and the symptoms to which it has given rise.

The first part of the work, as we have said, is devoted to the natural history of medicinal articles, and is deserving of high praise for the clearness and precision displayed in the descriptions. As it would be impossible for us to attempt an analysis of it, we will merely extract at random one of them, as a specimen of the plan pursued by the author.

"Scammony.—Under the name of Aleppo scammony is employed an inspissated juice, (a gum resin,) from the roots of the *Convolvulus scammonia, L.* a native plant of Syria and the neighbourhood of Aleppo, and belonging to the natural order of the *Convolvulaceæ, J.*

"*Desc.*—Roots fusiform, very thick, fleshy, lactescent; stems thin, twining; leaves triangular, pointed, smooth, petiolate, of a bright green; flowers pedunculate; the peduncles furnished with two bractes; calyx foliaceous; corolla campanulate, white, yellow, or purple.

"Three kinds of scammony are met with in commerce, *Aleppo, Smyrna,* and *Montpellier.* The first is furnished by the plant whose botanical characters have just been given: the second, by the *Periploca scammonia, L.* a native of Mysia, Anatolia, and Cappadocia, belongs to the natural order of *Apocyneæ, J.;* and the third, also called scammony in cakes, from its form, is prepared with the juice of the *Cynanchum monspeliacum, L.* of the same natural order as the last, and also with those of some species of Euphorbiæ, mixed with cinders, earth, and other foreign bodies. These three articles are very different from each other.

Aleppo.	Smyrna.	Montpellier.
In pieces of various sizes, dry, friable, light, porous, of an ash-gray colour externally; fracture dull, somewhat pulverulent: odour slight, somewhat like rancid butter; taste acrid and nauseous; but little soluble in water, with which it forms an emulsion of a greenish-yellow colour; soluble in alcohol.	Softer, less friable, porous, brownish-black; fracture compact; odour disagreeably fetid or empyreumatic; taste very acrid, very nauseous; less soluble in water; somewhat soluble in alcohol.	Round, flat, compact pieces, scarcely porous, black; fracture somewhat granular; inodorous, or having but a slight smell, taste acrid and bitter: soluble in water. scarcely soluble in alcohol.

"The method of obtaining the scammony is simple. At Aleppo and Smyrna, the tops of the roots are cut, the juice received into shells and permitted to inspissate; this is the scammony in shells, which is very rare, hard, porous, of a reddish or whitish-gray colour, semi-transparent, &c. The scammony of commerce is obtained by incisions into the roots, or by expressing their juice.

Analysis. (*Bouillon-Lagrange and Vogel.*)

Aleppo.		Smyrna.	
Resin	60	Resin	29
Gum	3	Gum	8
Extractive matter	2	Extractive matter	5
Fragments of vegetable matter and earth	35	Fragments of vegetable matter and earth	58

"When treated by water and alcohol, good Aleppo scammony should only give one-third of insoluble residuum.

"*Use.*—Aleppo scammony is very little used at present, this probably has arisen from the difficulty of obtaining it pure. It possesses very energetic drastic properties, and may be advantageously administered in certain cases of habitual constipation, in passive dropsies, &c. When deprived of its colour by animal charcoal, it loses none of its therapeutic powers, as has been proved by Messrs. Planchi, Chomel, &c.

"Pharmaceut. prep. dose, &c.

"As a drastic purgative one to six, and progressively to twelve or fifteen grains in boluses or pills.

"Tincture, (scammony one pint, alcohol at 32° eight pints,) eight gtts. to ℈j."

The consideration of each class of remedies is followed by a very useful table of the doses of each article, which may be safely given in the twenty-four hours.

The second part commences with pharmacy, properly speaking; this of course includes all pharmaceutical manipulations, the rules to be observed in performing them, and the phenomena to which they give rise. This part of Dr. Foy's work, like the last, is entitled to praise, and presents in a small compass a vast number of practical rules in the preparation of medicines, calculated to be of great service to the student of pharmacy. The general directions given for the formation of the different classes of articles, as powders, tinctures, &c. are particularly deserving of close study. We have noticed these as we know of no other work in which they are presented in so clear, yet concise a form. As in France, the apothecary administers a numbér of remedial agents, which, in this country, where he is only the vender of drugs, belong to the province of the physician or nurse, no slight part of the work is devoted to the subject of baths, drinks, poultices, &c.; and contains many useful hints.

The third portion of Dr. Foy's treatise contains therapeutics, and

is by no means equal to the others; in fact, it should have rather been termed a compendium of the practice of medicine, than on therapeutics. Like all other compendiums on this subject, it is worse than useless, as it is impossible to compress in a narrow compass a description of the various shades and complications of disease, and the diversified treatment they necessarily require. The author appears to be an eclectic in the fullest sense of the word, though he certainly has a great predeliction for the contra-stimulant doctrine, since he observes, that the discovery of the tolerance of remedies is one of the most brilliant discoveries of modern medicine, and may one day, perhaps, be our guide in the vast labyrinth of medical science.

The fourth part is on the art of prescribing, an art which is scarcely attended to in the course of medical instruction in this country; students of medicine being supposed to acquire it by intuition, or at least it is taken for granted, that a certain acquaintance with the nature of medicinal articles will enable them to combine these agents in such a manner as to fulfil the desired indication. It is from this want of a proper knowledge of the art of prescribing that we find such an eagerness among students for the acquisition of prescriptions, which they are in hopes will serve them on all occasions in their professional career; a very short period however of actual practice soon shows them the fallacy of this opinion; in fact, those guides can be employed but in very few cases. Dr. Foy makes the following observations on this point:—"What is to be taken into consideration in therapeutics, before prescribing a particular remedy? The nature of the disease, its intensity, the age, sex, habits, temperament, &c. of the patient. Now, in what manner can all these points, so important in practical medicine, be judged of *a priori* by the compilers of formulæ?"

But there is another consideration, which is of equal importance; the value of a great number of remedies wholly depends on their modes of preparation and administration; how often do we find a substance regarded as inert by some practitioners, whilst in the hands of others, who are more expert in adapting it to the circumstances of the case, it proves of the highest value. At the same time, it must be freely admitted, that in nothing has the medical art made a greater advance towards perfection than in rejecting those complicated formulæ, which were formerly considered as the glory of the science; this poly-pharmacy, which was so prevalent during the fifteenth and sixteenth centuries, and even later, was the bane of all rational practice, and a complete barrier to the appreciation of the real value of medical substances. Nothing is more false than the idea of the ad-

herents of this doctrine, that by these admixtures, therapeutic agents lend each a mutual support, and are endowed with increased curative effects. This taken in a general sense, is erroneous, and wholly unsupported by actual experience, added to which, it is impossible to ascertain the action of remedies so employed. But at the same time, that we are thus opposed to this mistaken vanity of too many physicians in making a parade of their pharmaceutical knowledge, by the combination of a host of medicines in the same prescription, we cannot too strongly advise a strict attention to the subject of the present division of Dr. Foy's work, which is well drawn up, and comprises several tables, calculated to afford the student great facilities.

From the foregoing abstract it will be perceived that the author does not admit as medicines any substance which contributes in a direct manner to the nourishment of the body, though he agrees that the non-naturals, as they were formerly termed, are valuable therapeutic agents. But the multitude who wish to be healed, and too many of those who profess to heal, despise such simple means, and require remedial articles, whose powers shall be manifest and striking; the mass of mankind are naturally empirical, and consider medicine as a mere collection of specific formulas against particular ills, and although they no longer have implicit faith in seethed vipers, magisteries of pearls, or even in the omnipotent virtues of theriac, still a firm reliance on specifics is as general and as deeply-rooted as it was centuries since. Medicine must and will continue empirical till these ideas are totally abandoned, and the practitioner is guided by the lights of physiology and pathology. It is true we are but too often obliged to minister to the mind under pretence of prescribing for the body, and to clothe in the shape most persuasive to the fancy, the medicine supposed to be best adapted to the coporeal malady.

R. E. G.

BIBLIOGRAPHICAL NOTICES.

XVII. *Epidemiologia Española, o Historia Cronologica de las pestes, Contagios, Epidemias y Epizootias que han Acaecida en España, desde la venida de los Cartagineses, hasta el año* 1801. *Con noticia de algunas otras enfermidades de esta especie que han sufrido los Espanoles en otros Reynos, y de los Autores Nacionales que han escrito sobre esta materia, así en la península como fuera da ella.* Por el LICENCIADO DON JOAQUIN DE VILLALBA, Professor de Cirugia Medica, Primer Ayudante de Cirujano mayor del exercito, Academia de la Real Academia Medica Matritense, &c. &c. 2 tomo, pp. 348. Madrid, 1803.
A Chronological History of the Plagues, Epidemics, Epizootics, &c. which have affected the Spaniards from the earliest periods up to 1801. By DON JOAQUIN VILLALBA, &c.

Few subjects in medical literature present more interesting matter for investigation than the history of epidemic diseases. They have prevailed at all periods of the world, under every sun, and in the midst of every clime; and whether we examine them as falling upon man in a state of barbarism, or surrounded with all the comforts and luxuries of civilized life, they are observed to sweep forward in a wide career of destruction, and prostrate every thing beneath their all-powerful empire. The interest and importance of the subject have induced us to depart from our usual rule, in noticing a work published at so remote a period as that which we have announced above. But although this treatise on epidemics has been so long before the public, we question much if it is not as new to our readers as most of those which are daily issuing from the press; for a Spanish book on medical subjects is almost as great a rarity amongst us, as one from the empire of the grand mogul. These considerations will, we trust, afford an excuse for the course we have pursued, even though the matter of the work itself should not be considered by our readers of the most interesting character.

In describing the epidemics of Spain, Dr. Villalba has divided the periods which he considers into five epochs: the first extending from the earliest periods to the birth of Christ: the second from that time to the period of the restoration of letters in Europe, or the year 1500: the third to the year 1600; the fourth to 1700; and the fifth to 1800.

This division will assist us in the observations we propose to make, and we shall endeavour to follow the author through the several epochs which have been enumerated.

In the early history of the Spaniards, truth is so interwoven with fable, actual events so confounded with the fictitious occurrences which a state of society characterized by the grossest ignorance, a credulity prepared to yield confidence to the most astounding improbabilities, and a superstition tending to impart a colouring of faith alike to the plausible and the marvellous, contributed so fruitfully to develope, that we scarce know what to receive as genuine, and what to reject as spurious, and the offspring of mere fabulous tradition.

But whatever may have been their condition, the state of the country which they inhabited, their physical force, moral attributes, pursuits, and modes of life, certain it is, that like their fellow beings, inhabitants of other climes, and influenced by similar and diverse agencies, they suffered from all the devastating influence of epidemic diseases. Exposed to the same inimical physical causes, and the same corrupt and demoralizing habits and modes of life, which exercise, at present, as they have done in all ages, their influence in visiting mankind with pestilence and death, whenever a concurrence of circumstances tended to impart activity to these causes, we find that their operation was attended with results the most calamitous, and ravages the most desolating.

The early Spaniards, we are told by Diodorus Siculus, constituted the very nerve of the Carthagenian army. They not only furnished the treasure, but the physical force and moral courage, by which the republic was measureably preserved against the invasion of foreign foes. Their great bodily strength, but above all, their devoted and undaunted courage bore them through all difficulties. Neither the calls of hunger, nor the calamities of pestilence could for a moment weaken their devotion to the cause they had espoused. When the whole Carthagenian army was desolated by the plague, and a hundred and fifty thousand lay dead upon the field without sepulture, when consternation and horror drove their allies in flight, and left their cause at the discretion of their enemies, with arms in hand they bravely faced the desolation which surrounded them, and compelled the tyrant of Syracuse to capitulate. From this period then, must be dated all that we know of the early epidemics of the Spaniards. True it is, we read of dreadful disasters from famine and pestilence, to which they were exposed, long before the time to which we allude, yet these accounts wear so much the semblance of fable, that we cannot attach much importance to them. But let this be as it may, all the early historians of the exploits of the Carthagenians and Spaniards, concur in representing the latter as suffering less from the pestilence which afflicted the army, than the Carthagenians themselves, or any of their allies. This is a circumstance which deserves some consideration, as it becomes important to enquire into the causes which secured to them so important an exemption. They are represented as being remarkable for courage, sobriety, and cleanliness, all of which we know exercise great influence in warding off disease; as their opposites contribute powerfully to their generation and propagation. It is stated by Athenæus, on the authority of Filarco, that the richest, though clad in the finest and most costly attire, lived with the greatest frugality, and only drank water. This circumstance, together with the constant use of baths, the employment of white linen, the manufactures of which were so much praised by Strabo and Pliny, and the almost universal use of handkerchiefs, which prevailed amongst the Spaniards, and which have been so highly eulogized by Catullus and Silius Italicus, could not fail, by promoting cleanliness, to contribute to the preservation of health, and prevent the propagation of contagious diseases. But with all these habits of temperance, and this strict observance of frugality and cleanliness, they could not entirely escape that which seems to have been destined by heaven as a common scourge to mankind; and we accordingly find them suffering much, at different periods, from the ravages of epidemic diseases and their attendant evils.

About four hundred and seventy-six years before the birth of Christ, Spain was visited by pestilence and other afflictions, to which a great number of individuals fell victims. The Carthagenians, with a view of appeasing the anger of the gods, to whom they attributed their calamities, resorted to human sacrifices, inflicted incisions and scarifications upon their bodies, and immolated sheep and oxen. The second year of the Peloponesian war, B. C. 427, was also remarkable for a wide-spreading pestilence. After ravaging Ethiopia and other surrounding countries, as stated by Thucydides, Livy, and Dionysius Halicarnassus, it finally made its appearance in Spain, where it prevailed with frightful mortality, commencing first among the cattle, which nearly all perished from thirst and hunger, thus contaminating the atmosphere, but eventually falling upon the army and the entire population. The season had been characterized by such a drought, that the earth was not only parched, but the fountains and streams were dried. The Mallorquin sling-men attached to the army of Carthage, under the command of Magon, nearly all perished in a short time.

From this period up to 404, B. C. we find no particular mention made of any formidable epidemic attacking the Spaniards. It was during this year that Himilco was sent with an army to quell a revolt in Sicily, but the troops were attacked with such a destructive pestilence, that they were nearly annihilated. In a short time, according to the report of Ocampo, there was scarcely a Mallorquin, Andalusian, Celt, or African left in the army. They fell down in heaps in the midst of lamentations, where their bodies were left to putrefy, or to be devoured by birds and breast of prey. This, together with the practice which they instituted, of sacrificing the youngest and most beautiful to appease the vengeance of Saturn, tended in a powerful degree to augment the extent of the mortality and distress.

Livy describes a mortal pestilence which attacked the Carthagenians and Romans, at the siege of Syracuse, under Marcellus, B. C. 213; but this is not noticed by Señor Villalba. Nor does our author allude to another destructive epidemic described by the Roman historian, which took place in 126, from an immense number of dead locusts, drifted upon the shores of the Mediterranean. The first of these epidemics broke out simultaneously in both armies, and such were its ravages,

"That it diverted the attention of all from the councils of war. It prevailed most extensively without the limits of the city, in consequence of the marshy character of the grounds to which they were exposed, and the intense heat of the sun. The disease originated first from the unwholesomeness of the place, but was subsequently propagated by contagion. Those who sickened, were deserted and left to perish, or those who were in attendance upon them, contracted the seeds of the disease and shared the same melancholy fate. Daily funerals and deaths were before their eyes, and they were constantly assailed by the cries and lamentations of the sick and the dying. Their minds finally became so accustomed to the scene of death and desolation which lay before them, that they not only disregarded the sufferings of the sick, but neglected to bury the dead. Heaps of lifeless corses were constantly exposed to those who were every minute expecting the same fate. The dead infected the sick, and the latter, those in health, with the pestiferous exhalation which escaped from them; fear and consternation seized upon every mind, and preferring rather to meet death by the sword, than by the horrors of disease, they sought an issue to their sufferings by rushing upon the posts of the enemy. The Carthagenians suffered much more than the Romans, in consequence of

the insalubrity of the locality upon which they were encamped, and Marcellus only saved his army by withdrawing it within the city. It was in this unfortunate expedition perished the two generals, Hippocrates and Himilco."*

The second epoch extends, as we have seen, from the birth of Christ to the period of the revival of letters, or the year 1500. During this long period, the Spaniards suffered much, in common with other nations, from the ravages of epidemic diseases. The almost constant warfare which was carried on, the incursion of the barbarians, and the holy zeal which vented itself in the toils and privations connected with the crusades; all tended not only to favour the development of diseases of a pestilential character, but also to introduce into Spain, as well as other parts of Europe, many of a character which had been hitherto unknown. Amongst the latter may be mentioned small-pox, which was first conveyed to Spain by the Arabs in 714, the period of their invasion of that country. This horrid scourge of the human race was first described in 622, by Aaron, a physician of Alexandria, and afterwards with more precision and clearness by Rhazes, Averroes, Avenzoar and Avicenna, all Arabian physicians. In 589, we find the first account by the author, of a form of the plague accompanied with pustules and buboes of the groins. It was affirmed by St. Gregorie Turonensis, to have been conveyed from Spain to Marseilles, by a vessel bound to that city, where it committed the most frightful ravages. "All the houses were but as many sepulchres, and the whole city a vast cemetery."

Leprosy was also a frequent disease during this period, and so great was the dread of contracting it, that its unfortunate victims were too often deserted in the most deplorable condition, and denied even the commonest sympathies. This led to the establishment of lazars, for the accommodation of the miserable objects, who before were driven from every human abode, to seek shelter beneath the open heavens, or find a release from their sufferings in a death the most horrid.

In 1348, we have an account of a destructive plague, which, commencing in the east, extended westward, and pervaded nearly all Europe. In the month of June, it made its appearance at Valencia, and such was the mortality attending it, that scarcely any escaped. From Italy it extended to Sicily, Sardinia, and Majorca, where it prevailed with such fury that in less than a month it nearly depopulated the whole island; and it has been estimated that more than thirty thousand individuals were destroyed by its ravages. In the city of Valencia, during the month of May, and the first part of June, three hundred souls perished daily of this appalling pestilence.

Amongst the diseases which made their appearance, must be mentioned the lues venerea. Our author does not agree with those who maintain that it was first brought from St. Domingo, by the crew of Columbus, but affirms that it had prevailed in Europe some time prior to the return of the celebrated navigator from his voyage of discovery.

The succeeding century, corresponding with the third epoch of Señor Villalba, presents us with the history of numerous plagues and epidemics, not less formidable than those which have been enumerated. These differed much in their characters, and derived their origin from various sources. We cannot

* Livy, Lib. XXV.

enter into any extensive details regarding them, but shall confine our observations to a few of the most striking, and best characterized epidemics.

In 1564 the city of Zaragoza was visited by a most destructive pestilence. It prevailed with such mortality, that between the first of May and the month of December, upwards of seventeen thousand persons were destroyed by its ravages. This plague was said to have been brought from France by means of some clothing impregnated with the contagion. It has been described by Porcell as of a truly formidable character, and marked by the following symptoms:

"The patients were attacked with painful tumours and abscesses of the kind designated pestilential. They were of variable configuration and magnitude, some not larger than a common pea, while others were as large as an almond, chestnut, or even an egg, and were either rounded, flattened, or oval in their configuration. They took place indifferently behind the ears, in the neck, back, arms, buttocks, abdomen, groin, and the whole of the inferior extremities. They either made their appearance simultaneously with the fever, or one or two days after or before it. Carbuncles, anthraces, petechiæ, vibices, &c. also appeared about the same period, varying in size from that of a small pea to that of a common-sized porringer. When there was only one, it was usually large, but if several occurred, they were small in the same ratio. The carbuncles were generally accompanied with pustules of a hazel, greenish, or black colour. They were so painful and distressing that the part conveyed the sensation of being too firmly constricted with a chord. The urine was usually transparent, as in health. The fever did not always terminate in the same manner. In some individuals, after the development of the tumours, all pain and uneasiness subsided. The tongue, however, remained coated and black, the pulse small, feeble, and slow. With others the fever was distressing, and the vital forces were so prostrated, that the patient was harassed with the greatest anxiety and restlessness, complaining of a consuming sense of heat internally, while the surface was cold. The countenance was disfigured, yellow, or livid, and the pulse vermicular or creeping. Others presented a milder train of symptoms, during the two or three first days. The strength and spirits were but slightly impaired; the countenance exhibited the colour of health; the heat of the surface was moderate; there was a general tranquillity both internally and externally, the pulse being but litle more frequent than natural. About the fourth day, however, the countenance became suddenly altered; a general dismay seemed to seize upon the patient, succeeded sooner or later by death. Nearly all complained of violent pain of the head, with inability to sleep, and many became delirious. There was also great nausea, with vomiting, the fluid discharged varying much in colour and consistence. There was also great thirst, restlessness, loathing of food, and violent pain in the stomach. Post mortem examinations did not reveal any alteration of the blood or other fluids, except that contained in the gall-bladder, which was distended with a porraceous or greenish-coloured viscid bile. In some instances, indeed, this vesicle equalled or surpassed the size of that of an ox." p. 102.—*Juan Zonias Porcell. Informacion y curacion de la peste y Zaragoza, y conservacion contra peste en general.*

In 1570 an epidemic petechial fever prevailed to an alarming extent in Spain, and was conveyed from thence to America, where it occasioned a frightful mortality in several situations, and especially at Mexico, as we are informed by Dr. Bravo. The disease had been hitherto but little known, and many considered it entirely new. It had been, however, described, by some writers in different parts of Europe.

It was, however, in 1596, that the kingdom suffered most from the influence of pestilence. So formidable was its visitation, that we are informed by a faith-

ful historian more than twelve thousand persons fell victims to it in less than six months. The symptoms of the disease were nearly the same as those described above. A feeling of horror seemed to pervade every object, and the temples and cemeteries were crowded to overflowing by disease and death The intense heat of June and July seemed to exasperate the pestilence, and every situation was filled with the beds of the sick and the dying, which the hospitals could not accommodate. Commerce was entirely suspended, and health was only restored by the return of cold weather. Our author does not mention the treatment pursued, but states that the *Armenian bole* was in high repute as a preventive.

The two remaining epochs furnish matter far more important relative to the epedemiology of Spain than either of the three we have passed in review. As the tide of civilization rolls on, new diseases are developed and old ones are modified by the new circumstances which are created by an artificial state of society. These conditions exercised no little influence upon the epidemics of the seventeenth and eighteenth centuries; and we accordingly find frequent mention of the appearance of diseases not before known, or which assumed such new forms as to impress upon them the semblance of new diseases Amongst these may be mentioned the ulcerated sore throat, or cynanche maligna, which prevailed extensively about the years 1610 and 1611, and which was described by the Spaniards under the appellation of *garrotella*. This, though noticed by preceding writers, was supposed at the time to be a new disease, and gave rise to considerable discussion, some treating it by venesection, repeated as often as six or eight times, while others considered it certain death to open a vein. The plague and petechial fever were also prevalent during the period we are considering, especially in the larger cities of the kingdom. One of these epidemics deserves to be mentioned, as well on account of the extent to which it prevailed, as the cause by which it was said to have been produced. It ravaged the city of Malaga and the surrounding country, in 1637, and was described by Drs. Francisco de Arcevedo and Juan de Viana.* The first of these authors estimates the mortality occasioned by it at forty thousand, occurring in the short space of three or four months. By Viana, however, it is only rated at twenty-five thousand, including Malaga and the adjoining country. The character of the disease was a malignant fever, accompanied with a diffused erysipelatous eruption, dry carbuncles or pustules, (*dry gangrene?*) or even a herpes, which constantly distilled an ill-conditioned sanies or ichor. The buboes were hard and painful to the touch; they made their appearance on different parts of the body, as the neck, arms, groins, thighs, chest, about the ears, throat, temples, and the articulation of the lower jaw. About the third or fourth day, the patient generally became delirious, and was affected with an alarming inflammation and tumefaction of the face. This formidable disease was occasioned by the use of damaged wheat, a large quantity of which was brought to the market during the year in question.

But however extensive the mortality occasioned by this epidemic, it was greatly surpassed by another which prevailed at Seville and in other cities of Spain, in 1649. The mortality in Seville and its environs, in a little less than three

* *Tratado de la Peste, &c.*

months, was estimated at two hundred thousand, at Malaga, twenty thousand, and at Murcia, twenty-six thousand. The disease was supposed to have been introduced by fomites, with some silks, which arrived in a vessel from a foreign port. The annals of Seville furnish a most melancholy picture of the horror and consternation occasioned by this desolating pestilence. Every situation was crowded with the sick and the dying, and every countenance was clouded with the gloom of despair, and an air of desolation pervaded every object. We regret that Senor Villalba has not collected some account of the characters of the disease. From what is said, however, it seems to have been accompanied with carbuncles, buboes, and other symptoms of the plague.

From the consideration of this epidemic we pass to one with which most of our readers are more familiar, and in which they are more interested: we mean the yellow fever, which in modern times has committed such frightful ravages upon many of the most populous cities of the South of Europe and of America. We find in the work before us no mention of the disease previous to the year 1730, at which time it is stated that "an epidemic made its appearance at Cadiz, accompanied with two mortal symptoms which had not been before observed in Spain. These were a yellow, livid, or brown suffusion of the skin, which were constant precursors of a vomiting of black matter, after the appearance of which few recovered, and the disease terminated quickly in death." Tomo II. p. 112, 113. The appearance of this new disease, and the mortality it occasioned, excited so much dread and consternation, that the captain general, resident at the port of St. Maria, sent a deputation of two physicians to the city of Cadiz to investigate the origin, character, and circumstances of the epidemic. This commission was instructed to examine three bodies of those who had died of the disease, with a view of determining accurately its character, and the organs which were principally affected. We regret that the result of these latter investigations are not detailed by our author. It is, however, affirmed by Dr. Francisco Fernandez Navarette, on the authority of the inquiries which were instituted, that the disease was imported by some vessels recently arrived from America. In 1741 the same disease appeared at Malaga, and was supposed to have been introduced by a vessel from America.

In 1753 the attention of the authorities was directed to the investigation of the yellow fever which had attacked the squadron in the West Indies, under the command of Señor Don Pedro de la Cerva. From an examination of those who had died of the disease, the stomach and gall-bladder were found distended with black matter of the kind that had been ejected by vomiting, and the duodenum and some of the other intestines black and sphacelated.

> "The treatment consisted in purging, at the commencement, with two or three ounces of manna, dissolved in a sufficient quantity of an infusion of aromatic plants or tamarind water; afterwards blood-letting where the circumstances required it, ptisans of a refreshing character, with the addition of nitre, cordials, and alexipharmics, with spt. cornu cervi, chicory, angelica, &c. and cataplasms of barley meal, red sanders, pulp of cassia, &c. applied to the stomach."

The disease only attacked Europeans recently arrived.

Dr. Villalba does not mention the yellow fever which is said to have committed such devastations at Cadiz in 1764. It is, however, stated by Lind to have prevailed with such mortality, that a hundred frequently died daily.

"The dead bodies having been examined by order of the court of Madrid, the stomach, mesentery, and intestines were found covered with gangrenous spots. The orifice of the stomach appeared to have been greatly affected, the spots upon it being ulcerated. The liver and lungs were both of a putrid colour and texture. The stomach contained a quantity of an atrabilious liquor, which when poured on the ground produced a sensible effervescence, and when mixed with spirit of vitriol a violent ebullition."*

We must here take leave of Señor Villalba and his labours. It will be manifest to our readers that a work of the kind will not admit of analysis. It is merely a chronology of epidemics, and as such may be referred to with advantage by those who have neither time nor inclination to turn to the various authorities from which it has been compiled. We must do our author the justice to say, that he has evinced much zeal in the collection of his materials, but we regret that in speaking of the different epidemics he has gleaned so scantily from the account of their cause, character, and treatment. More extensive details upon these subjects would have added much to the value of his book As it is, however, we have found enough in the examination of his labours, to heighten our opinion of the value of the contributions of the Spaniards to our stock of medical literature, and to induce us to hope, that, ere long, we may have more frequent opportunities of improving by the results of their exertions in the cause of science.

E. G.

XVIII. *De la distribution par mois des Conceptions et des Naissances de l'Homme, considérée dans ses rapports avec les saisons, avec les climats, avec le retour periodique annuel des époques de travail et de repos, d'abondance et de rareté des vivres, et avec quelques institutions et coutumes sociales.* Par L. R. Villerme Paris, 1830, pp. 103, 8vo.

That the human species should stand alone in the animal kingdom, in being exempt from those periodical influences which impel other beings in the affair of reproduction, has hitherto been regarded as one of the most marked distinctions with which kind nature has characterized our species. We say hitherto, since recent investigations seem to render the qualification necessary, by making it probable that some seasons are more favourable to reproduction in the human species, than others. Indeed, the author of the interesting treatise under notice has shown very conclusively, that, as a general rule, the births are most numerous during the winter months, and consequently the spring is the season in which the *maximum* of conceptions take place, and as there are fewest births in summer, the *minimum* of conceptions must occur in autumn. It must be observed, however, that deviations from this general rule occasionally happen, owing to variations in the seasons, or differences in geographical position.

M. Villermé's estimates are founded upon above seventeen millions of births, recorded monthly in various portions of Europe, from Sicily to Sweden and St. Petersburgh, as well as one of the states of South America. His periods of observation embrace from eight to twenty consecutive years, some of them in fact include seventy and one hundred years.

The subject will doubtless appear more clear from an inspection of one of

* On Hot Climates, p. 91.

his estimates; and we select an example founded upon eight years' observation in France, concluding on the 1st of January, 1825.

Months.	*Totals of Births.*	
January	710,553	
February	672,335	2,108,916
March	726,028	
April	665,024	
May	626,109	1,854,690
June	563,557	
July	574,320	
August	602,946	1,793,534
September	616,268	
October	627,554	
November	629,004	1,894,297
December	637,739	
	7,651,437	

From this it would appear that, supposing all the months of equal length, that is to say, composed of thirty-one days, their order when arranged according to their relative proportions of births, beginning with the highest numbers, would stand thus:—1, February; 2, January; 3, March; 4, April; 5, November; 6, September; 7, December; 8, October; 9, May; 10, August; 11, June; 12, July.

Arranged, however, according to the conceptions, and observing the same order, the months would stand thus:—1, May; 2, June; 3, April; 4, July; 5, February; 6, March and December together; 7, January; 8, August; 9, November; 10, September; 11, October.

It hence appears, that in the period comprised between the months of February and July, inclusive, the conceptions are most numerous; that is to say, during the six consecutive months commencing between the winter solstice and the vernal equinox, and ending between the summer solstice and autumnal equinox, comprehending the close of winter, all the spring, and the beginning of summer.

If, however, a calculation be made in which the births and conceptions taking place in the northern and southern departments are exhibited separately, the result is somewhat different from that which has been given. Thus in the south of France there appears to be a greater proportion of conceptions in the months of November, December, January, February, March, and April, or during the six coldest months, than in the north; whilst on the contrary the proportion appears greater in the north during the months of May, June, July, August, September, and October, or the warmest months. This sensible difference is manifested in the space of only four degrees of latitude.

It has been observed, that calculations made for all France, taking Paris as a centre, fixes the *maximum* of births for February, and consequently the *maximum* of conceptions for May. But the result of observations made at Copenhagen, Frankfort upon the Main, Munich, London, together with several towns in Holland, Belgium, &c. show that as many or even more births take place during the month of March, as in February, making the month of June almost as favourable to fecundation as that of May.

From all this, M. Villermé concludes, that the influence, either direct or indirect, exerted over the function of reproduction by the order of the seasons,

and the great variations in temperature resulting from the revolution of the earth about the sun, is a well-established point, and that man in a state of civilization, like plants and the inferior animals, is more or less subject to various periodical influences.

The most striking general conclusions which he has formed, are the following:—

1*st*. The circumstances found associated with the greatest fecundity, or which appear most favourable to it, are—

The return of spring, and more especially the end of this season, and the commencement of summer;

Periods marked by the greatest abundance, fêtes or holydays, which bring the sexes more together;

In a much less degree, may be reckoned the times when the greatest number of marriages take place;

To which may very probably be added, as regards the female, not too frequent intercourse with the other sex.

2*d*. The circumstances which, on the contrary, prove unfavourable to fecundity, are—

The end of summer and beginning of autumn;

Periods of insalubrity, and principally those of epidemics produced by marsh miasmata, (for it is chiefly on account of the unhealthiness of the season, embraced by the last of summer and commencement of autumn, that what has been said in regard to it may be explained.)

Seasons of scarcity, or in which it is difficult to procure subsistence, or when food is of a bad quality;

The abstinence or *fastings* observed during lent;

In a trifling degree, the epochs marked by few marriages;

3*d*. Those in fine, who remain the year round under circumstances in which nourishment, temperature, salubrity, intercourse with the other sex, &c. vary but little, present an annual progress of fecundity much more regular than those subjected to circumstances which vary considerably with every season. This then is the reason, at least we ought to believe so, that in general the distribution of conceptions and births varies less from month to month among the inhabitants of cities than in those residing in the country.

The sum of M Villermé's conclusions therefore is, that all those circumstances augment fecundity, which promote constitutional vigour, whilst those diminish it which, on the contrary, tend to debilitate, especially such as impair the health. At the same time, it would be a grand error to suppose that the state of health alone regulated the conceptions. These are still influenced by such circumstances as fasts, severe labour, age, with various others needless to mention.

But the cause which surmounts, and, as it were, governs all others, is the annual march of temperature, or influence of the sun in its various positions with respect to the earth. By the admission of this hypothesis, M. Villermé thinks it easy to account for the diminished number of conceptions observed in warm countries in seasons when the sun had dried up every thing upon the surface of the earth; why in countries when the temperature is more moderate, the same effect is observed principally in autumn when we see the vigour and

life of nature decline and grow feeble around us; why love seems to occupy the attention of the Laplanders so little, and that of the Greeks, Italians, and Spaniards so much. G. E.

XIX. *Dublin Hospital Reports and Communications in Medicine and Surgery.* Volume the Fifth. Dublin, 1830, pp. 631. 8vo.

In our last number we laid before our readers an analysis of a recent volume of the Dublin Medical Transactions, and we have now the pleasure of introducing to them another work of a similar character, emanating from the same city, and possessed in every respect of equal merits. Few publications have acquired, and deservedly too, a higher reputation than the Dublin Hospital Reports, and the volume that has just appeared, and of the contents of which we proceed to give some account, is calculated to add to the character the work has hitherto sustained.

The volume under notice consists of two parts. A clinical report of cases in the medical wards of the Meath Hospital, during the session of 1828 and 1829, by Drs. R. J. Graves and Wm. Stokes, constitutes the first part. It would be impossible within the limits to which we are here restricted to do justice to this very able paper, which includes cases of diseases of the arterial system, of the lymphatics, of the organs of respiration, and of the abdominal viscera—we therefore proceed at once to the second part, and we do this the less reluctantly, as the report of Drs. Graves and Stokes is accessible to the profession here, having been inserted in the volume of *Select Medico-Chirurgical Transactions*, just published by Messrs. Carey & Hart; and moreover there will be found in the periscope of the preceding and present number, several of the most interesting cases contained in it.

The second part of the volume commences with a paper by Abraham Colles, M. D. on certain diseases of the anus and rectum. The affections treated of, are organic stricture, spasmodic stricture, vascular tumour, and ulcer of the rectum. A perfect cure of the first complaint, Dr. Colles thinks has not been effected by any plan of treatment hitherto employed. The use of the bougies, usually recommended, appears to be well calculated to alleviate the sufferings of the patient; but he says that he has paid great attention to the use of this instrument, and has not been so fortunate as to have effected a permanent cure in a single instance. Dr. C. offers nothing cheering on the treatment of this disease, he has used various internal medicines, mercury, arsenic, cicuta and iron, but without benefit. Large quantities of mucilage, he says, appear to give most relief, and blue pill, combined with a double quantity of Dover's powder, has also occasionally afforded much temporary alleviation.

Spasmodic stricture of the rectum, Dr. C. thinks, has no existence. Spasmodic stricture of the sphincter ani he considers as a rare disease, never having seen but one case of it.

Vascular tumours of the rectum, Dr. C. is of opinion, should be treated by excision, in preference to the ligature, and his mode of operating is as follows:—

"The tumours having been made to protrude, by means of a purgative injection, I direct my assistant to pass a hook or common tenaculum through one or two of the largest, while I seize another lengthwise with a polypus-forceps,

then drawing the tumour a little towards the axis of the gut, with a large pair of scissors passed behind the forceps, I cut off all that portion which is engaged between its blades: I then proceed in the same manner to remove those tumours which the assistant holds transfixed by the hook. By fastening and drawing out the tumour with the forceps, we much facilitate its removal by the scissors. Proceeding in this way I guard against these tumours being drawn up within the sphincter as soon as the first had been removed. I do not think that any case will require the removal of more than three of these tumours, and not unfrequently the cure will be ensured by cutting off only two of them. When the operation is finished, the protruded parts generally retire within the sphincter: should any part remain out, it must be completely pushed in with the finger.

"In order to guard against the danger of hæmorrhage, I take care not to prolong my incision higher on the bowel than what I conceive will, when replaced, lie within the circle of the sphincter; for, if we cut the gut higher up, this part, when returned, may bleed freely from not having any surface closely opposed to it. Besides, we know that by cutting higher up we are in danger of cutting the trunk of the vessel, instead of confining our incision to the tumour, which is composed solely by the convolutions of its very minute branches."

When hæmorrhage follows this operation, it may be arrested by a tampon of lint or sponge.

This disease, Dr. C. says, may be rendered very mild, if not ultimately cured, by injecting every night going to bed, eight or ten grains of sulphate of zinc dissolved in four or five ounces of water. Dr. C. has also known much benefit to be derived from smearing the protruded parts with a liniment of ol. oliv. ℥ij. and plumb. subacetat. liquor, ʒj.

Ulcer of the rectum sometimes occurs at a short distance above the anus. The remedy for this disease—

"Is to introduce into the rectum a convex-edged scalpel, and make an incision through the entire length of the ulcer, continuing it through the sphincter, and dividing the verge of the anus; as soon as this wound has got into a state of suppuration, we should dress it and the ulcer, with some stimulating ointment introduced on a dossil of lint. The cure goes on without interruption, although it is rather tedious and slow of healing. I need hardly add, that the final cicatrization will be promoted by the occasional application of nitrate of silver."

The second article is on the mucous membrane of the rectum. The author, John Houston, Esq. states that the tube of the rectum does not form, as is usually conceived, one smooth uninterrupted passage, it is, on the contrary, made uneven in several places by valvular projections of its internal membrane standing across the passage. Of these valves there are usually three or four.

"The position of the largest and most regular valve is about three inches from the anus, opposite to the base of the bladder. The fold of next most frequent existence is placed at the upper end of the rectum. The third in order occupies a position about midway between these, and the fourth, or that most rarely present, is attached to the side of the gut, about one inch above the anus. In addition to these valves, of tolerably regular occurrence, there are frequently several intermediate smaller ones, but which from their trifling projection and want of regularity in their situation, merit comparatively little notice.

"The form of the valves is semilunar; their convex borders are fixed to the sides of the rectum, occupying in their attachments from one-third to one-half of the circumference of the gut. Their surfaces are sometimes horizontal,

but more usually they have a slightly oblique aspect, and their concave floating margins, which are defined and sharp, are generally directed a little upwards. The breadth of the valves about their middle varies from a half to three-quarters of an inch and upwards, in the distended state of the gut. Their angles become narrow, and disappear gradually in the neighbouring membrane. Their structure consists of a duplicature of the mucous membrane, enclosing between its laminæ some cellular tissue, with a few circular muscular fibres.

"The relative position of the valves, with respect to each other, deserves attention. That situated opposite the base of the bladder, most commonly projects from the anterior wall of the gut; the valve next above from the left, and the uppermost from the right wall: that near the anus, which is of least frequent occurrence, occupies a place when present towards the left and posterior wall. Many deviations from these stated points of attachment for the folds will be found to occur, but the arrangement is nevertheless always such, as to form by their being placed successively on different sides of the gut, a sort of spiral tract down its cavity.

"In regard of the sacculated form which the rectum acquires by the presence of these valves, the gut resembles somewhat the colon in the condition of its interior, but in the peculiar spiral arrangement of the valves, it bears more an analogy to the large intestine of some of the lower animals, in which, as for example, the cæcum of the rabbit, the large intestine of the serpent and dog-fish, a continuous spiral membrane traverses the cavity from end to end, and gives to the alimentary matters a protracted winding course towards the anus.'

The physiological purpose of this conformation, M. H. considers to be to support the weight of fecal matter, and prevent its pressing on the anal opening, where its presence always excites a sensation demanding its discharge. But Mr. H. thinks these valves most interesting, as they may possibly become the most frequent seat of that morbid alteration of the inner membrane termed stricture. And there is a weighty reason why the surgeon should bear in mind the existence of these folds, that he may not mistake them for stricture of the gut, and resort to the bougie, and thus induce the disease he intends to remove.

The third article is by Dr. T. E. Beatty, and is an account of a case of aneurism of the abdominal aorta, with the dissection, and which most conclusively shows that the diagnostic signs supposed to designate this affection are entirely equivocal; but unfortunately it furnishes none which can be depended upon, and we therefore pass on to the next paper.

This is the history of two cases of aneurism, one of the left subclavian, the other of the right carotid, successfully treated by ligature, by William Henry Porter, Esq. The most interesting points in relation to these cases, are, 1st, that in both instances, notwithstanding the large size of the arteries, a single round ligature only was employed; a mode of treatment, which, according to Mr. Porter's experience, "is more successful than any contrivance for arresting the current of the blood, whether by the presse artère or otherwise."

"2d. That the carotid was tied within a quarter of an inch of its origin from the innominata, a circumstance heretofore considered as likely to interfere with the success of the case, by preventing the formation of an internal coagulum. 3d. The very trifling disturbance of constitution that followed on the tying of so important a vessel as the subclavian artery; the patient never having a single symptom that could occasion anxiety as to the result, until the occurrence of inflammation and suppuration of the sac; and 4th. The recovery of both patients notwithstanding suppuration, an event which has always been considered

as pregnant with the most dangerous consequences. Indeed, in the case of carotid aneurism, three times was the woman's life in such imminent peril, as almost to preclude hope, but in the other instance the patient recovered with as little trouble, and perhaps with more rapidity, than if it had been a case of common abscess."

The physiological and practical observations on the utero-placental circulation, and the phenomenon of placental soufflet, with its influence in detecting the existence of pregnancy, and the death of the fœtus in utero, by EVORY KENNEDY, M. D. (the next paper in order,) are exceedingly interesting. Dr Kennedy is of opinion, that the placental soufflet principally depends upon the transmission of blood through the arterial tubes and cells of the placental part of the uterus, an opinion which he has rendered exceedingly probable, and he states that he has found this sound distinctly cognizable after the second month from impregnation; and that its value as a diagnostic method cannot be denied. Dr. H. also points out many valuable indications which he obtained from the placental soufflet.

Our limits will not permit us to give a detailed analysis of this paper, it will, however, be found, with the excellent memoir by Dr. Ferguson, on the same subject, noticed in our last number, in the volume of Select Medico-chirurgical Transactions to which allusion has already been made.

The sixth article is entitled "Observations on some of the Affections of the Fingers and Toes, attended with Fungous Growths," and is by FRANCIS RYND, Esq. The extremities of the fingers and toes are occasionally the seats of diseases, which although not actually tending to the destruction of life, are productive of great anguish and pain to the patient, and are very tedious and sometimes difficult of cure, and are well worthy of the attention of the physician. According to Mr. Rynd—

"The membrane or matrix of the nail exhibits three forms of fungoid growth, similar in their appearances and the distress they occasion, differing in their situations and the causes by which they are produced. One of these is where the matrix is the original seat of the disease; it occurs most frequently idiopathically, or at least no satisfactory cause can be assigned for its production, but occasionally it seems to arise from some external violence, such as a blow or bruise The second is that which owes its origin to pressure of the nail on the membrane, or what is termed the nail growing into the flesh. And the third *is a fungous growth of the matrix, symptomatic of, and apparently occasioned by, the existence of an abscess underneath it.* That the two first of these may eventually become the same, or that the constant pressure of the edge of the nail on this most sensible structure will involve it altogether in one mass of disease, cannot be controverted, and then the same treatment will be applicable to both. but if the third or symptomatic species happens to be mistaken for either of them, and the surgeon's attention be directed to the fungus instead of to the abscess, of which it is an indication, months of misery will be inflicted on the patient, who only recovers when the abscess bursts or is opened."

This last disease, which appears to be the true *onychia maligna*—

"Commences usually at the root of the nail, it may be with a small collection of matter like the cutaneous or superficial paronychia. This bursts, and the posterior edge of the nail is seen detached, while a small pale-coloured and exquisitely painful fungus projects behind it; as the nail is thrown off, the fungus increases, becomes red, and if pressed upon by the nail, the pain is excruciating: sooner or later the entire nail is thrown off, but it does not leave a fun-

gous growth regularly occupying its former situation; the matrix has been secreting its proper material of which the nail is composed, but it has done so irregularly, unhealthily, and in patches, and the irritation and pressure occasioned by those small portions of the nail which usually adhere to the surface by one edge only, produce deep and formidable ulcerations. The extremity of the toe or finger, (and the great toe is very frequently enlarged,) now appears to be expanded in breadth, with a large ulcer occupying a larger space than that of the former nail. Its surface is irregular, partly fungoid, partly excavated; on it are observed small portions of nail firmly adherent, and which cause great pain if pulled or pressed upon. The ulcer bleeds often, and usually two or three small clots are seen upon its surface: its discharge is not often profuse, but it is glutinous, and the dressings adhere to it. The margin of the sore is elevated, of a dark red colour, but it does not spread, and having once attained to a given size, something larger than that of the former nail, its progress is checked, and it remains for months in nearly the same condition, occasioning the greatest pain, and rendering the hand or foot, as the case may be, nearly useless."

The causes of this disease have never been satisfactorily explained.

The remedy recommended by Mr. Rynd is to make a deep incision down to the bone, from three to four lines behind the posterior margin of the sore, which incision is to be carried round it, and then the entire surface is dissected out.

"The wound is dressed simply with pledgets of lint moistened with spirit and water, and is usually healed in the course of sixteen or eighteen days. But the success of this operation depends on the entire surface being completely removed, for if any portion is left behind, it still retains its quality of secreting nail, and its indisposition to heal; the wound still remains open at that part, nor will it cicatrize until this structure is destroyed either by a caustic, or by the knife."

This operation has been lately attributed to M. Dupuytren, but Mr. R. says that it has been performed for years in the Dublin hospitals, and it is the same operation which was performed by the late Dr. Dorsey, see his Elements of Surgery, Vol. II. p. 349. Professor Physick has treated this disease with great success, by sprinkling the fungus with a powder consisting of equal parts of red precipitate, white vitriol, and corrosive sublimate, then covering it with dry lint, and pouring over the whole tincture of myrrh.

The next disease noticed by Mr. Rynd is that known by the name of inverted toe nail. Mr R. is of opinion that there are several varieties of this affection. Sometimes it consists, he says—

"Of a thickened condition of the nail, together with its taking a wrong direction in some part, and growing fairly down into the soft parts. This thickening of the nails is very analogous to the formation of corns, rarely produces much greater inconvenience, is seldom accompanied by fungous growths, and is relieved in a manner similar to that by which corns are relieved, by steeping the foot in warm water until the nail is completely softened, scraping down the nail with the edge of a bit of glass, and freeing the toe from the pressure that had stimulated the matrix to too active a secretion of the material of the nail and thus produced the disease. In other forms of this affection the nail is not thickened; on the contrary, its edge sometimes is thinner where it is detached from the subjacent membrane which is pushed against it, becomes fungoid, and thus produces the disease within itself. In this affection the toe positively becomes altered in shape; it is contracted and turned slightly upwards at the side whereon the nail seems to press, and it is this contraction which forces the soft parts against the edge of the nail."

For the cure of this disease, Mr. K. advises the operation just described for the cure of onychia maligna; a less painful, and we suspect equally successful operation, is that devised by our lamented colleague, the late Dr. Godman, and described in the twelfth volume of the Philadelphia Journal of the Medical and Physical Sciences.

Art. VII. is an account of a case of ruptured intestine, related by Mr. JOHN HART, in which the jejunum was ruptured transversely half across, allowing its contents to escape into the peritoneal cavity, causing peritonitis and death. There was no lesion of the abdominal parietes. Mr. Hart also notices a case of ruptured spleen from a fall, and which had cicatrized, and also an instance in which the liver was torn completely across from its anterior to its posterior margin, and several of the large branches of the *vena portæ*, hepatic artery, and venæ cavæ hepaticæ divided. In such cases little can be done in the way of treatment; Mr. H. however very properly recommends that purgatives should not be given, and that the intestinal canal should be kept quiet by opiates while the peritoneal inflammation is combated by general and local detraction of blood. A very interesting case of peritonitis, communicated by Drs. Graves and Stokes is appended, and which will be found in our Periscope, department of Practice of Medicine.

We pass over the pathological observations by JOHN HOUSTON, Esq. and the cases of diseased brain by ROBERT LAW, M. D. the most interesting of which will be found in the Periscope of the present and preceding numbers, and also the case of obstinate psoriasis, successfully treated by WILLIAM WEST, M. D. and which we shall insert in the Periscope of this number. See department of Practice of Medicine.

The next article in order is an exceedingly interesting letter from J. CHEYNE, Esq. physician-general to the forces, an experienced and discriminating physician, recommending small and repeated bleedings in hæmoptysis and incipient phthisis.

The treatment of this latter disease more especially is a subject of extreme importance, and one respecting which the opinions of physicians are utterly at variance, some recommending active exercise and full diet, and others repose, abstinence, and active antiphlogistic measures. Though both may be in extremes, is perhaps true; yet, entertaining as we do the belief of the inflammatory character of tubercles, we cannot help suspecting that the treatment of the first is farthest from the most judicious method. It is foreign to our purpose at present to enter into the discussion of this subject: we may perhaps have occasion to return to it however, in our next number, when we propose to give an account of some of the new remedies for consumption—at present we must proceed to the consideration of Dr. Cheyne's observations.

"I have often seen phthisis," says Dr. Cheyne, "commence without any unequivocal symptom of pulmonary disease, but apparently as a fever of an inflammatory kind, with quick pulse, hot skin, flushed countenance, white tongue, high-coloured urine, &c. &c. The disease might have passed for general fever, no local affection being predominant; some mitigation of symptoms was usually observable after a period of two or three weeks, and the physician, expecting that the disease would, in all likelihood, terminate gradually, and probably without crisis, naturally promised recovery, although it might be slow; instead of which, consumption either rapidly advanced, the case becom-

ing what is vulgarly termed galloping consumption, or its progress was slow and insidious. In the course of such attendances, the physician at last begins to feel some surprise at the continued quickness of the pulse; he fears that all cannot be right, while the patient, although he eats well and walks about, does not gain strength; the breathing too is not quite natural, an occasional dry cough occurs, of which the patient seems unconscious, and emaciation is palpable. The disease has now made some progress, and another physician being called in, the case is looked at with a new eye; night perspirations are discovered; on minute inquiry hectic fever is more than suspected, and the case is pronounced to be incipient phthisis. It is in the more chronic cases to which I have alluded, that small bleedings of six ounces practised once in four or five days have sometimes apparently proved sanative.

"There is a species of hæmoptysis, perhaps it ought rather to be called bronchial hæmorrhage, which runs a course of two or three weeks, I think generally the former period, which is also attended with symptoms of general fever, and in which the hæmorrhage may seem to be a symptom of general fever; but in my judgment both the fever and hæmorrhage are symptomatic of incipient consumption. In these cases recovery seems to take place under antiphlogistic treatment, but often it is not solid recovery. Gradual emaciation is observable, with that ominous, dry, barking cough, which is often so long a solitary symptom of slowly advancing tuberculation. Then after months of what may be designated unconfirmed health, rather than manifest disease, the patient declines more rapidly, and hectic fever concludes the sad history. Patients of this description may sometimes be saved by timely bleedings, not exceeding six ounces every sixth or seventh day, with a regimen suited to the strumous diathesis."

Pulmonary apoplexy, Dr. Cheyne says, may also be sometimes successfully treated by small bleedings repeated at stated periods

"In bronchial hæmorrhage," says Dr. Cheyne, "it is not the loss of blood which is destructive to life, but the inflammation and disorganizing process, which is caused by tubercles, of which the hæmorrhage is but a symptom, and often even a means of temporary relief. And considering that not merely has the hæmorrhage been checked by venesection, but the vascular irritation on which it depends, in some sort arrested, I have been led also to try small bleedings once every week or ten days, in what I conceived to be incipient phthisis, and with a degree of success which forbids the relinquishment of that practice Among other encouraging cases, I may mention that of a young gentleman of a family which consumption had completely ravaged: he came to me last spring with a dry barking cough, (not from cold.) There was a portion of the thorax in which respiration was inaudible, and which, on percussion, emitted scarcely any sound, and was also the seat of uneasiness; and emaciation had already commenced. This patient was relieved by these bleedings, and when I last saw him he said he was quite well, and his appearance did not contradict the assertion.

"Both in hæmoptysis and in incipient phthisis these small bleedings may be practised with safety, and often, if I mistake not, with more advantage than any other remedy in use. To acquire a just view of such cases we ought to consider them as instances of scrofula affecting the lungs, in which an inflammatory state is caused by the presence in that organ of irritating substances, as tubercles doubtless are. In phthisis these attacks of inflammation in the tuberculated portions of the lungs precipitate disorganization. Phthisis is often, for a long time, only suspected, until uneasiness in the chest, perhaps increased frequency of the pulse, hurry of respiration, and greater debility, prove that inflammation around some clusters of tubercles is more speedily accomplishing the destiny of the patient. If the inflammation were subdued and the general health improved, perhaps it might be within the power of the absorbents to re-

move tubercles if still in an early stage. This view would justify the exhibition of remedies of opposite kinds. No point is better established than that the scrofulous patient is best treated by nourishing and restorative food and medicine, but there are many cases of scrofula in which we must for a time substitute bleeding and an antiphlogistic regimen for generous food and stimulating applications, to prevent the disorganization of a viscus, and of such cases this appears to be one.

"In hæmoptysis venesections act rather as an alterative than a styptic; mere hæmorrhage from the lungs does not justify the measure. Bleeding, however, is amply justified by the existence, during hæmoptysis, of pain, hurried respiration, or any other symptom of parenchymatous or of membranous inflammation.

"In cases of hæmoptysis with inflammatory symptoms, venesection may be necessary during the attack; but generally tartar emetic in nauseating doses, given every hour, or every two hours, proves a more powerful styptic: one-third or one-fourth of a grain of tartar emetic in a draught containing also ten or fifteen grains of nitre, a combination which is often powerfully diuretic, will be still more efficacious."

We have repeatedly employed this remedy ourselves with marked benefit, and have at the same time irritated the chest with tartar emetic ointment with great advantage.

When the respiration is, however natural, and there is no cough, stricture, or pain in the thorax, Dr. C. says the case will be better treated by small doses of opium, two or three grains of Dover's powder, for instance, every two or three hours, &c.

The treatment recommended by Mr. Cheyne in incipient phthisis, is journeying if practicable; diet as generous as the state of the lungs will permit, in some cases a glass or two of claret, and small bleedings. Sponging the chest and arms with very dilute muriatic acid, or with five parts of Mindererus's spirit and one of rosemary. an issue over the most suspected portion of the lungs, or a succession of blisters after each bleeding, not much larger than a dollar. A light bitter two or three times a day, with twenty or thirty drops of laurel water, or the nitro-muriatic acid internally, or perhaps some preparation of iron.

Some interesting contributions to ophthalmic surgery, by Arthur Jacob, M. D. follows.

In a report in the London Lancet, of a lecture of Mr. Lawrence's, there is the following passage. "The conjunctiva sometimes acquires a livid tint in persons who have long employed the nitrate of silver locally; and as far as I know that change of colour is permanent." Dr. Jacob states that he has *frequently noticed* this effect of the nitrate of silver, and that he believes the stain to be indelible, even when existing in the slightest degree. He says that he has not observed that the application of even a strong solution for a fortnight, or three weeks, will produce the effect, but he believes its continuation for six weeks or two months will do so. The colour, it is said, in cases where the solution has been used for only a short time, is a light olive, sufficiently deep however to produce very obvious deformity; and when a strong solution has been used for a longer time, the stain much deeper.

We cannot doubt from the authority of Mr. Lawrence and Dr. Jacob, that these stains do occur, yet we question much their being of so frequent occurrence as is stated by Dr. Jacob. We have used the nitrate of silver in hundreds of cases

in the Pennsylvania Eye Infirmary and private practice, and have not seen these stains in a single case; Mr. Estlin, of Bristol, who has been for nearly twenty years engaged in the treatment of disorders of the eyes, and has had the management of fourteen thousand cases of these complaints in a public institution, says that he has "never seen a single instance of any stain being left upon the cornea in consequence of this application;" "nor can I believe," adds Mr. E. "that this event has escaped my notice from its occurring in patients whom I have not had an opportunity of seeing after recovery, as I have constantly under my care whole families, now grown to men and women, whom I attended as children with ulcers of the cornea, and in whose cases I used the lunar caustic." Mr. E. has seen one case only in which it occurred on the conjunctiva.*

Mr. R. T. Hunt, in an experience of eight years with the remedy, during three years of which time he has been assistant surgeon to the Manchester Eye Infirmary, has rarely ever seen this stain described by Dr Jacob. Mr. Barton, the senior surgeon of the establishment just named, confirms the statement of Mr. Hunt.†

The nitrate of silver is certainly the most valuable remedy we possess in many of the diseases of the eye, and we cannot help thinking that the observations of Dr. Jacob will be mischievous if they deter practitioners from its use.

The injury above noticed, Dr. Jacob states is not the only one which follows the use of this remedy; the effects of its application to ulcers of the cornea, he says is still more to be dreaded. When applied to such ulcers, he adds, either in solution or substance, it either adheres to or becomes entangled in the flocculent surface, and if this surface be not a slough, and completely cast off, the nitrate of silver, rendered black or brown by exposure, becomes permanently fixed as the ulcer heals, and constitutes an indelible dark speck. We have never seen this either ourselves from the solution of nitrate of silver, though in the habit of employing it in almost every case of ulcer of the cornea; and we have never seen it produced but in a single instance by the solid caustic, and that was a case in which the cornea was extremely thickened and disorganized, and the slough never completely separated. Mr. Hunt says that he has never witnessed it;‡ and Mr. Estlin makes the same statement.§ This latter gentleman indeed says, that contrary to Mr. Jacob's opinion, his experience has led him to the conclusion that the cornea is very unsusceptible of retaining the discolouration of any extraneous substance.

The injury produced by the nitrate of silver is, however, seldom so great, according to Dr. Jacob, as "that which more frequently follows the use of acetate of lead," of which we believe no notice has as yet been published.

"If a solution of acetate of lead," says Dr. J. "be applied to the eye when the cornea is suffering from an ulcer of a particular character, the acetate is decomposed, and a white precipitate is deposited on the ulcer, to which it adheres tenaciously, and in the healing becomes permanently and indelibly embedded in the structure of the cornea. The appearance produced by this cause cannot be mistaken, its chalky impervious opacity, distinguishes it from the pearly

* London Medical Gazette, Vol. VII. p. 811. † Ibid. Vol. VII. p. 618.
‡ Loc. cit. § Loc. cit.

semi-transparent structure of even the densest opacity produced by common ulceration. The degree and form of the opacity is varied as the original ulceration was varied. If the original ulcer was deep and circumscribed, the opacity is chalky-white, dense, and defined. If the original ulceration was superficial and diffused, or composed of numerous small specks of ulceration scattered over the cornea, the opacity presents the appearance of several irregularly-shaped dots or specks of a dirty white appearance. If the ulceration has been attended by a prolapse of the iris, the peculiar opacity forms a complete or partial margin round the place of the prolapse, the structure of the iris not entangling the precipitate as that of the cornea does. The opacity appears to be produced at once, and by a single application; I have seen it the day after a drop of solution of acetate of lead had been put into the eye by mistake."

We have no experience ourselves in relation to this effect of acetate of lead, never having used it as an application to ulcers, not thinking it a proper remedy, and the representations of Dr. Jacob will certainly render us still more reluctant to resort to it.

The next subject treated of by Dr. Jacob is treatment of obstructions in the lachrymal passages. Dr. Jacob considers obstructions of these passages as of three kinds; 1st, that caused by mucus plugging the narrow part of the nasal duct; 2d, closure of the passage from tumefaction of the mucous membrane. and 3d, true stricture partial or permanent.

For the removal of the obstruction caused by the plugging up the duct with mucus, Dr. J. recommends syringing; the introduction of the flexible probe. and to direct the patient to compress the sac often with the point of the finger in the course of the day; to blow the nose frequently; and holding the nostrils to inspire strongly, thus exhausting the air from the nostril, and the nasal duct opening into it, consequently removing its contents.

In obstructions caused by tumefaction of the sides of the sac, Dr. J. advises the application of leeches over or near the sac, if it be tender to the touch, and astringent solutions, as the *saturated* solution of acetate of lead or alum. introduced by an Anel's syringe.

In cases of true stricture, a different treatment is required, but Dr. J asserts from experience, that the passage may be reëstablished permanently without cutting into the sac. As Dr. Jacob's directions for the employment of the necessary means are exceedingly minute, and we have seen many practitioners exceedingly embarrassed in applying them, and knowing from experience that the instructions given by Dr. J. will enable most persons to succeed, we give them at full, cautioning, however, against the use of sealing wax bulb to the bristles, which we cannot but think to be a dangerous expedient.

"The surgeon having satisfactorily ascertained by the syringe that there is no passage for fluids, should next sound the duct with a flexible probe, for this purpose a hog's bristle answers excellently, the largest size should be selected, as there are very few puncta which will not admit the largest; the bristles should be perfectly grown, the bulb at the extremity round and solid, such as are used by shoemakers, and if the punctum be large, the bulb may be enlarged by the addition of a speck of sealing wax. Such bristles should be carefully prepared beforehand; the bulbs freed from the particles of cuticle which adhere to them, and polished by oiling and rolling them between the finger and

thumb: those headed with sealing wax should be neatly made, and care should be taken that the wax will not slip off, by applying it sufficiently hot and burning it in. Other coarse hairs may also be used, and are often preferable to hog's bristles, being more flexible: I have the tail of an hippopotamus which supplies me with this kind of probe of every size required. I take such a bristle as I have described, cut to a length of about three inches, apply the bulb perpendicularly to the punctum, and if it does not enter, press steadily until I see the resistance yield, and that the bulb has entered. I then pass it horizontally, as I before described, until I strike it against the opposite side of the sac, and then turn it into the perpendicular direction. This, however, can scarcely be accomplished, from the flexibility of the bristle, without catching a short hold of it, which cannot be done with the fingers; the operator must therefore seize it in the square-nibbed forceps: the small one used for extracting eyelashes answers well, or common small-sized dissecting forceps cut square at the point instead of being pointed. When, by this means, the bristle is turned up into the perpendicular direction, and the bulb down into the nasal duct, it should be pressed against the obstruction with as much force as the bristle will bear, turning, pressing, and relaxing, leaning sometimes to one side, sometimes to another, as a person would manage an elastic bougie against a stricture of the urethra. If after every effort the bristle cannot be passed, recourse must be had to the metallic probe. The surgeon should be provided with a number of silver probes the size of the bristles, and softened so as to admit of being easily bent without breaking; they may be cut to a length of an inch and a half, with a quarter of an inch of the hand-end turned at a right angle in order to be fitted to remain in the passage like a style, if necessary; or they may be left of the usual length, which I prefer, the short probe or probe style, as it may be called, being less manageable. The silver probe thus introduced, is raised, but can seldom be brought exactly into the line of the sac, in consequence of the prominence of the brow; I therefore here bend it by holding it against the margin of the orbit and depressing the hand-end. Thus, having a probe in the duct, bent at the distance of about an inch and a half from its bulb, I push it firmly down, breaking through the resistance until it has sunk to the elbow which I bent upon it, and the patient feels it in the nostril. It may be questioned whether the passage thus made is in the proper direction, the probe may be forced between the bone and periosteum, or perhaps even into the antrum, I can only say that I have often practised what I now recommend, and the result has proved that the probe took the course of the duct. The passage having been thus artificially formed, it remains to preserve it; this can only be accomplished by keeping some foreign body in it until it is permanently reëstablished. If the style probe, an inch and a half in length, has been used, it will do well enough, the angle at which it had been bent near the hand-end, preventing it from slipping into the punctum or sac; and this is the advantage of using this short one, which I have already said is not so manageable as a probe of three or four inches. I am myself in the habit of introducing the probe of full length, and when I have pushed it through the obstruction I bend it at the punctum, and cut it off so as to leave an angle or hook head outside the punctum to prevent it slipping in. This bending and cutting soft silver wire is easily accomplished with a good pair of cutting pliers, such as are used by wire-workers. After the probe has been once passed, the surgeon may be unwilling to run the risk the withdrawing of it, lest he should not be able to get a softer and more flexible one through the same passage. If the passage has been easily forced I withdraw the silver and introduce a bristle probe; if there has been much difficulty in forcing it, it is better to secure the steps we have gained and leave the silver one in. If the silver one be retained it should be adjusted so as to make the least possible pressure on the punctum or margin of the lid, and if the bristle be left in, the portion outside the passage should be

bent and firmly secured to the cheek; or over the cheek bone by court plaster. If the probe be allowed to stand perpendicularly, it drags the punctum towards the nose, and either causes it to be dilated or ulcerated, and thus spoiled. The only dressing to the part should be a small light compress of old linen kept constantly wet with cold water. The probe should not be allowed to remain longer than forty-eight hours at the utmost, as it is liable to produce ulceration or dilatation of the punctum: it is to be replaced by catgut. The surgeon having provided catgut of the proper size, should soften the point between the teeth to prevent it from catching against the side of the sac, and with the square-nibbed forceps dexterously introduce it, and push it on until a sufficient length has passed. It must not be denied that this is often a matter of difficulty requiring much care and perfect use of the fingers, but it is no more to be abandoned on that account than any other difficult surgical operation. If two or three inches of the gut have been passed into the nostril, the operator need not take any trouble to draw it out through the external nostril, as this will be accomplished by the patient when it has become soft. The portion of gut outside the punctum should be coiled up and secured by bandage on the forehead, and no more dressing than a light damp compress applied. The next day the part should be examined and cleaned, but the gut need not be disturbed; the day after that, however, the portion which hangs from the nostril should be gently pulled until an equal portion of fresh gut from the coil on the forehead is brought to replace that which has been withdrawn. The gut being mere animal membrane, softens and sometimes even dissolves before the second day, it should not, therefore, be allowed to remain unrenewed longer than forty-eight hours. About the fourth day from its introduction the gut should be withdrawn altogether, the part well cleaned with a sponge and warm water, the sac compressed, and the patient directed to clear the nostril by repeatedly blowing through it. A stream of water should then be sent through it with the syringe, and the patient should receive particular directions to sponge the part with lukewarm water frequently in the day, to compress the sac repeatedly with the point of the finger, and to make an effort to inspire often strongly with the nostrils closed. The next day it should be syringed again, and if there should be any difficulty to the passage of the water, a bristle probe headed with sealing wax should be passed and withdrawn, and the syringing repeated. The third or fourth day the astringent solution may be used, as directed in a former paragraph, with the occasional use of the bristle probe, until the flow of tears down the cheek ceases, and the eye resumes its natural appearance."

Dr. Jacob concludes his paper with some observations on the treatment of entropium, or tapping the eye, and on an improvement in spectacle frames.

We must here take leave of the volume under consideration, though several valuable papers remain unnoticed. The most important of these will, however, be found in the volume of Select Medico-Chirurgical Transactions already several times referred to, and others will be hereafter noticed in our Periscope. The analysis we have given of a part of the volume will enable our readers to determine whether the favourable opinion we expressed of its merits is not fully justified; and in conclusion we cannot withhold the pleasing intelligence that it is intended in future that the work shall contain a more extensive series of hospital communications, and that a volume will be published at shorter intervals than hitherto.

XX. *Transactions of the Medical and Physical Society of Calcutta.* Vol. IV. Calcutta, 1829, pp. 449. 8vo.

The Medical and Physical Society of Calcutta was instituted on the first of March, 1823, for the purpose, as stated in their resolutions, of advancing professional knowledge, for the mutual benefit of their members, more particularly with reference to Indian diseases and treatment; and for the promoting by every means, the study of such branches of natural history, as are connected with the practice of medicine, or lead to medical research. The transactions of the society bear ample evidence of the zeal and success with which these objects have been pursued. In less than eight years this society has published four volumes, embracing a large mass of information respecting the diseases of India, its indigenous medicinal plants, the medical topography of its most important places, and in addition, many highly interesting cases illustrative of the various branches of the healing art.

It would be vain to attempt to transfer to our pages, all this valuable mass of information; we shall, however, from time to time, enrich our periscope with some of the most important articles;* but at present we must restrict ourselves to an account of a few of the most interesting papers in the last volume of their transactions.

The first we shall notice is a paper on the employment of large doses of ipecacuanha in dysentery, without exciting vomiting, by W. Twining, Esq. The author admits the propriety of venesection and corresponding remedies in the early or inflammatory stage, but strongly recommends the employment of ipecacuanha in very large doses, for the purpose of relieving tenesmus and irritation, restoring a healthy state of the alvine evacuations, and in more remote stages of the disease, promoting the healing of the intestinal ulcers. Mr. Twining's plan consists in first cleaning out the bowels by a dose of castor oil; twelve hours after this has operated freely, he gives six grains of powdered ipecacuanha, with four grains of extract of gentian, and five grains of pil. hydrar. in three pills, which are to be repeated every night at bed time, and at day-light in the morning a small dose of compound powder of jalap. By these means he says that a cessation of all the distressing symptoms are procured, and it is then sufficient to continue six grains of ipecacuanha, with four grains of extract of gentian every night, giving a very small dose of compound powder of jalap, or a moderate dose of oil every morning, for four or five days more During the above treatment great attention is requisite to the quantity of food used, as well as its quality. Not more than six ounces of food and drink together should be taken at one time, nor should this quantity be repeated oftener than is absolutely requisite to prevent the patient from sinking; and in severe acute cases, half this quantity should not be exceeded.

When this plan of medicine and diet is followed, Mr. T. says that ipecacuanha seldom produces vomiting, and that he has often given twelve grains of this article with eight grains of extract of gentian in four pills, without exciting vomiting; and half that quantity to a child thirteen years of age without causing

* Several of the papers in the early volumes of the transactions have been already noticed in the periscope of the preceding number of this Journal.

nausea. The gentian appears to control the emetic effects of the ipecacuanha, for three grains of the same ipecacuanha given alone, repeatedly vomited. The first effect, according to Mr. T. of ipecacuanha given in ordinary cases of acute dysentery, is generally a slight increase in the secretions of the bowels, the evacuations becoming more copious and feculent; pain and tenesmus are abated, while the quantity of blood and slime immediately decrease and soon disappear altogether.

"If the above treatment," says Mr. T. "be steadily pursued for a few days, scarcely any other medicine will be requisite in most cases which apply in an early stage of the disease. At the same time I most strenuously urge the necessity of a free use of the lancet, and repeated bleeding by leeches in all recent cases of dysentery when there is either pyrexia, morbid sensibility of the belly on pressure, evacuation of blood with the stools, or tenesmus. But when repeated bleedings have accomplished all that can be wished from them, ipecacuanha, with the other medicines above stated, will be found of infinite service in soothing irritability, and restoring a healthy state of the bowels. I need not add, that tepid baths, fomentations, and poultices over leech-bites while they are still bleeding, are useful. Where the free use of calomel has been chiefly relied on, and employed to salivate, in some instances a purging and tenesmus have still continued, and in these the combination of ipecacuanha and gentian has then been employed with the most happy results. Opiates have generally appeared injurious in dysentery, except when given with calomel, so as to cause that medicine to be retained in the first portion of the intestines, while it may act on the secretions of the duodenum and liver."

A number of cases are related by Mr. T. illustrative of this plan of treatment, which appears to us worthy of consideration. We have repeatedly employed the ipecacuanha in dysentery, and often with manifest advantage, but always in small doses, and the great difficulty we have met with is to prevent its emetic effects; these it appears may be obviated by combining it with extract of gentian.

The next article we shall notice is on the lactucarium or lettuce opium, by J. GRAHAM, M. D. The sedative power of the lettuce has been known from the remotest antiquity—but the merit of first trying its effects upon the human economy, and showing its similarity to opium, is due to Professor J. R. Coxe, of the University of Pennsylvania; some attention was also attracted to the article by the elder Dr. Duncan, who endeavoured to introduce it into use. It is asserted by most persons who have used this article, and particularly by Dr. Graham, that it produces sleep and allays pain with considerable certainty without being followed by any bad consequences or unpleasant feelings. The principal obstacle to the introduction of this medicine into use is probably the difficulty of preparing it, and the mode sanctioned by the London and Edinburgh Pharmacopœias is certainly troublesome, and Dr. G. says the very worst that has been proposed. We shall therefore transfer to our pages the one recommended by Dr. Graham. This gentleman prefers the coss lettuce, the cultivation of which he says, is attended with no difficulty, and resembles that of the poppy, only giving the lettuce sufficient space, (eight or ten inches asunder,) that they may be allowed to grow large, and not forced to run to seed too quickly.

"When the plant is about to flower, the milky secretion being then in the greatest abundance, it must be collected, and this is done in the following manner:—Having a cup to contain the juice fixed on a stand, about one foot

and a half high, and a couple of knives, one for collecting the milk, and another for cutting the stalk of the lettuce, you commence your operations by making a clean oblique division of the stem about an inch and a half from the top, when the milky secretion instantly exudes from both extremities, and must be taken up by the knife prepared for that purpose. You thus proceed by repeated similar divisions of the stalk, until all the juice is collected. The blade of the knife used for collecting the milk should have some elasticity, and be about two inches long by ¾ of an inch broad, with a blunt edge; for if sharp, there will be collected with the milk a considerable quantity of the substance of the stalk. The cup should have a cross bar, and contain a little water, which will enable the collector more readily to remove the adhesive juice from his knife. By making the division of the stem a little oblique, it gives a larger surface for the milk to exude on, and renders it more easily collected. The secreted juice is only contained in the vessels of the bark and leaves, and is pellucid until brought into contact with the air, when it immediately becomes milky, and if permitted to stand for a short time, assumes the appearance of a granulated mass, loses its adhesive qualities, and gradually assumes a brownish colour, like that of opium. Lactucarium prepared in this way is pure lettuce opium: its quality, however, depends much on the size and excellence of the lettuce. If this is either small or of an inferior quality, or if the juice is collected from sprouts thrown out by old stems, it will contain a very great quantity of caoutchouc, what Mr. John, of Berlin, found on analysis to be its principal solid constituent: and as this seems to abound more or less in the drug, however prepared, it might be worth while to free it from this inert substance, were it not doubtful that it would, like most other extracts, have its medicinal efficacy impaired by any attempts to purify it."

We have no doubt, that the cultivation and preparation of this article might be made profitable, and we recommend it especially to our southern friends—as it is probable that the plant raised in a warm climate will possess more active properties than when cultivated in a cold one.

We might indicate among the particularly interesting papers in this volume, the account of the epidemic bronchitic fever of infants and young children, prevalent at Calcutta, in 1828, by the late Dr. J. Adam, secretary of the Society; Dr. Mouat's description of the cholera morbus in his majesty's 14th regiment at Berhampore; Dr. Butter's paper on public health in India; and also a very well drawn up and valuable account of the general and medical topography of the Neelgerries, by D. S. Young, Esq.

We may hereafter revert to these and several other articles in this volume, but at present we must close this notice. We cannot do so, however, without expressing a hope that the example of zeal and industry set by this society, will not be lost upon those of the United States, and that the latter will not allow of its being said that a single society in India, in half a dozen years has done more to advance a knowledge of the diseases, indigenous medicinal plants, and medical topography of that country, than all our societies have accomplished for these subjects, in relation to our own country, in half a century. We know that neither the disposition nor the abilities are wanting; there must be something wrong then in the management of our societies that they have not done more that will tell.

XXI. *Anatomical Demonstrations; or Colossal Illustrations of Human Anatomy.* By Professor Seerig. Translated from the German. Part I. A. Schloss, London, 1831, pp. 34, 8vo. with four folio plates.

Of this splendid work, which is to consist of six parts, we have received the first, containing four large folio plates with full references printed in octavo.

The first plate represents the superficial nerves of the head and face; the second exhibits the principal branches of that interesting nerve, the fifth pair; and the third and fourth plates are devoted to various views of the whole and several parts of the organs of hearing and sight.

These illustrations are all on a scale larger than life, are extremely accurate, and beautifully executed. The author has acted judicially, it appears to us, in adopting a colossal scale for his figures. The difficulty of obtaining a knowledge of the minute parts of our anatomical structure has been felt by every student, and the small plates hitherto published for his assistance have often tended rather to perplex than assist him.

These plates will be very useful to the lecturer on anatomy; and every practitioner who takes upon himself to instruct pupils, and honestly wishes to give them the best facilities for the advancement of their studies, should possess a copy of this work.

XXII. *Anatomical Atlas on an entirely new plan.* By Professor M. J. Weber, Professor at the Royal Prussian University, Frederick William, at Bonn. A. Schloss. London, 1831.

This work is to consist of two sections containing sixty atlas sheets. The first section presents eight full-length views of the human body, of the adult size, each view composed of four atlas sheets. Tw o plates are devoted to front and back views of the human skeleton, and six otl rs will exhibit the muscles, arteries, veins, nerves, and ligaments.

The second section will consist of twenty-eight atlas sheets, exhibiting the brain, organs of sense and respiration, the alimentary canal, the male and female organs of generation; the supplements to osteology, syndesmology, angiology and neurology, &c.

The whole work will be published in five parts, of which the first has already appeared and is now before us. This contains a front and back view of the male skeleton, occupying eight atlas sheets; and three plates, each consisting of one atlas sheet. The first of these plates exhibits various views and sections of the head and of the bones which enter into its composition, views of a fœtal head, of the sacrum, of the first cervical vertebra, &c. &c. The second plate contains figures of the organs of hearing, voice and taste, and the third a posterior view of the pectoral viscera.

To the anatomical student these plates will be very useful, and to the popular lecturer on anatomy, actually invaluable. A general outline of anatomy is usually given to the senior classes in most of our colleges as a part of their regular course of study, and indeed it should enter into every liberal scheme of education. We have never seen any plates so well calculated to facilitate the

acquisition of such a general knowledge of anatomy, as those now under consideration, and we earnestly recommend them for that purpose especially. These plates are accompanied with a volume of explanations.

We hope to make our readers better acquainted with this work, as also of the one previously noticed, when we receive the concluding parts.

XXIII. *Select Medico-Chirurgical Transactions; a Collection of the most valuable Memoirs read to the Medico-Chirurgical Societies of London and Edinburgh; the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland; the Royal Academy of Medicine of Paris; the Royal Societies of London and Edinburgh; the Royal Academy of Turin; the Medical and the Anatomical Societies of Paris, &c. &c &c.* Edited by ISAAC HAYS, M. D. Philadelphia, Carey and Hart, 1831, pp. 420, 8vo.

For reasons that will be at once understood, a review of this volume will not be expected in this Journal; we may be permitted, however, to present to our readers a list of the articles contained in it, that they may form some idea of the character and variety of its contents. It contains fourteen memoirs, the titles of which are as follows:—

I. Observations on the Nature and Treatment of Erysipelas, illustrated by cases; by William Lawrence, Surgeon to St. Bartholemew's Hospital, &c. &c.—II. On the Treatment of Erysipelas by numerous punctures in the affected part; by R. Dobson, M. D. Surgeon to the Royal Hospital, Greenwich, &c. &c.—III. Case of Erysipelas, with some remarks; by A. Copland Hutchinson, Esqr., F. R. S. L. & E. Late Surgeon of the Naval Hospital at Deal.—IV. Observations on Painful Subcutaneous Tubercle, with cases and histories of the disease; by William Wood, Fellow of the Royal College of Surgeons, and F. R. S. E.—V. Auscultation, the only unequivocal Evidence of Pregnancy, with cases; by John C. Ferguson, A. M., M. D. Fellow of the King and Queen's College of Physicians in Ireland, &c. &c.—VI. Physiological and Practical Observations on the Utero-placental Circulation and the Phenomenon of Placental Soufflet, with its utility in detecting the existence of Pregnancy, and the death of the Fœtus in Utero; by Evory Kennedy, M. D. Licentiate of the King and Queen's College of Physicians in Ireland, and Assistant Physician to the Dublin Lying-in Hospital.—VII. An Inquiry on some disputed points of Chemical Physiology of the Blood and Respiration. 1. On the mutual action of Blood and Atmospheric Air. By Robert Christison, M. D., F. R. S. E., Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.—VIII. Experiments relative to the Carbonic Acid of Expired Air, in Health and in Disease; by J. Apjohn, M. D., M. R. I. A., Professor of Chemistry to the Royal College of Surgeons, &c. &c.—IX. Remarks on the tendency to Calculous Diseases; with Observations on the nature of Urinary Concretions, and an Analysis of a large part of the collection belonging to the Norfolk and Norwich Hospital; by John Yellowly, M. D., F. R. S., &c.—X. On the comparative infrequency of Urinary Calculi among Sea-faring People; by A. Copland Hutchinson, Esqr., Surgeon Extraordinary to his Royal Highness the Duke of Clarence.—XI. A further Inquiry into the comparative infrequency of Calculous Diseases among Sea-faring People, with some Observations on their frequency

in Scotland; by A. Copland Hutchinson, F. R. S. L. & E., Surgeon to the Westminster General Dispensary, &c.—XII. Clinical Report of Cases in the Medical Wards of the Meath Hospital, during the session of 1828 and 1829, by Robert James Graves, M. D., M. R. I. A., King's Professor of the Institutes of Medicine, &c. &c. and William Stokes, M. D., Lecturer on the Practice of Medicine in the School of Anatomy, Medicine, and Surgery, Park-street, Dublin, Physician to the Meath Hospital, and County of Dublin Infirmary, &c. &c.—XIII. Observations on the Peripneumonia of Children; by Thomas Cuming, M. D., Licentiate of the King and Queen's College of Physicians, Assistant Physician to the Institution for the Diseases of Children, &c.—XIV. Observations on a Peculiar Convulsive Disease affecting Young Children, which may be termed "Spasm of the Glottis;" by H. Marsh, M. D., M. R. I. A., Professor of the Principles and Practice of Medicine at the Royal College of Surgeons in Ireland, Physician to the Institution for the Diseases of Children, &c. &c.

Should this work receive the encouragement of the profession, the future volumes will present a still greater variety in their contents, and will embrace many translations of papers read to the various French, German, and Italian societies instituted for the advancement of Medical and Chirurgical knowledge.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Malformation.*—Mr. Houston, in the *Dublin Hospital Reports*, Vol. V gives the case of an infant, in whom every attempt to suck was immediately followed by fits of coughing, threatening suffocation, and continuing until the milk was all disgorged again. Similar consequences followed every attempt at feeding the infant from a spoon. The child quickly emaciated, and died the day after birth. On examination, the pharynx was found unusually wide, and terminating some way down the neck in a cul-de-sac, without having any connexion with the œsophagus. The larynx and its muscles were all perfect. The trachea was also complete on the anterior and lateral parts, but the posterior wall was perforated by a wide opening, from which the œsophagus took origin, and which appeared so smooth and oblique, as to render a passage from the larynx into that tube, as direct and easy as that along the trachea into the lungs. In the stomach and small intestines, a yellowish viscid matter was found in small quantity, and the large intestines were filled with greenish meconium. Nothing else unusual was observed, except that the orifice of the urethra was situated underneath and behind the glans penis.

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2. *Two newly-discovered Muscles for compressing the Dorsal Vein of the Penis, in Man and other Animals.*—Dr. Houston has described, in the fifth volume of the *Dublin Hospital Reports*, two muscles situated between the arch of the pubis and the penis; and for which he proposes the name of *compressores venæ dorsalis penis.* These muscles are more distinct in most of the mammalia, than in man. In the latter, they arise from the rami of the pubis, above the origin of the erectores penis and crura, and ascending in a direction forwards, are inserted above the vena dorsalis by joining with each other in the median line. They form a thin stratum of muscular and tendinous fibres, about one inch long, and three-quarters of an inch broad, and may, perhaps, be looked upon as portions of the erectores penis, which, instead of being inserted into the sides and lower part of the corpora cavernosa, mount over those bodies, to exert their compressing influence on the vena dorsalis. They enclose between them and the penis, the vein, arteries, and nerves of this region. Their anterior fibres are distinguished from those of the erectores, by the fibrous attachment of the crura to the pubis, their posterior margins are kept distinct from the front part of the levatores ani, known under the name of Wilson's muscles, by the pudic artery, which divides them in its course towards the dorsum of the penis.

The best procedure to display these muscles is the following:—Detach the bladder and levator ani with the hand from one side of the pelvis: then divide with a saw the pubis and ischium about one inch from the symphysis, and break off the bones at the sacro-iliac articulation: next dissect away carefully the remaining portion of the pubis from the symphysis, periosteum, and crura penis,

and then the compressores venæ, bearing still their natural relations to the crura and other muscles, may be exposed with very little difficulty.

The insertion of the muscles being in a great measure outside the pelvis, they may also be demonstrated without the section of the bones, by cutting on them in front of the pubis, and looking carefully for their tendon at the side of the vena dorsalis: from the tendon the knife may be carried downwards and backwards in the course of the fibres, and nearly the whole of the muscles can be thereby exposed.

It must, however, be remembered, that it will be needless to search for them in a thin emaciated individual, where the other muscles of the perinæum are so pale and soft, that even they can scarcely be distinguished. The subject should be robust, and the muscles red, in order to demonstrate them.

The use of these muscles is evidently to compress the dorsal vein of the penis, and mechanically obstruct the return of blood.

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5 *Congenital absence of the Gall-bladder*.—M. AMUSSAT communicated to the Royal Academy of Medicine the case of a man, twenty-four years of age, who died from a white swelling of the knee, and in whom, on examination after death the gall-bladder was found entirely wanting. the ductus choledocus was formed by two large canals.

The total absence of the gall-bladder is an extremely rare occurrence, and one the possibility of which has been doubted by several anatomists: it has been, however, met with.—*Gazette Médicale*, 26 *March*, 1831.

PHYSIOLOGY.

1. *Case of Spontaneous Lactation at an advanced age*.—The following example of this curious and interesting physiological phenomenon, is related in a recent number of the *North of England Medical and Surgical Journal*, by GEORGE SEMPLE, Esq, of Shipley Hall. Mrs. B. ætat 49, mother of 8 or 9 children, the youngest of whom is about 12 years old, lost, a year ago, a daughter-in-law, who died of puerperal inflammation about a fortnight after confinement of her first child.

On *her* death Mrs. B. took the charge of the infant—a little, puny, sickly baby. The child was so fretful and uneasy, so averse to taking any kind of food, and so troublesome, that Mrs. B. after several sleepless nights was induced, by way of soothing, to permit her to take the nipple of her breast into the mouth—the child was pleased and soon sunk to rest, and the old lady of course continued to give her this cheap and innocent sedative, from time to time. In the course of from thirty to thirty-six hours she felt very unwell, her breasts became extremely painful, considerably increased in size, and soon after, to her utter astonishment, the lacteal fluid was secreted, and poured forth in the same abundance as on former occasions after confinement of her own children

The child, now a year old, is a fine, healthy, thriving girl, and only a few days ago, says Mr. S I saw her eagerly engaged in obtaining an apparently abundant supply of healthy nourishment from the same fountain, which nearly twenty years since poured forth its resources for the support of her father.

Mrs. B. is a stout, healthy woman, and has continued to menstruate regularly, both since weaning her last child, nearly eleven years ago, and during the time she has suckled this little grandchild.

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5 *Identity of the nervous and electric Fluids*.—Dr. DAVID, in his inaugural thesis published in August, 1830, has given some interesting experiments illustrative of the striking analogy between the nervous and electric fluids. In September, 1829, Dr. David exposed the nerves of the thigh of a chicken. He

then divided them, and introduced into the neurilema a small brass wire, proportioned to the size of the nerve: the wire was made to touch the nervous pulp. Having then placed, near the opposite end of the metallic thread, a small needle, the latter exhibited very manifest oscillations. These oscillations appeared to M. David to be in proportion to the movements of the animal; so that they were much greater when the motions of the animal were more powerful. At some moments the oscillations of the needle were not manifest, and it was found that then the wire was not in immediate contact with the nervous pulp.

M. David repeated this experiment several times upon the largest nerves, and he frequently found the extremity of the needle describe an arc of four or five lines, and even more. If he forced the animal to struggle, at the same time that he held the extremity of the wire at a greater or lesser distance from the needle, he could evidently prolong the oscillations of the latter.

These experiments were too imperfect to convince M. D. that the nerves transmitted an electric current. The effects might possibly arise from an involuntary shock produced by the wire against so moveable an apparatus: and, again, if the oscillation of the needle did really depend upon an electric current, the latter might be the result of oxydation of the metal. To avoid these probable sources of error, M. D. afterwards experimented with the multiplicator of Schweiger and threads of platina: the results were still the same.

The sciatic nerve of a rabbit was insulated and laid bare, and carefully sponged; a piece of glass was gently introduced between the nerves and the muscles, while the leg of the animal was bent. The sensibility of the nerve was shown by the motions of the animal during the introduction of the needles, the one above the other, but not touching each other. They were placed in communication with the galvanometer: the animal was quite tranquil, and the needle of the multiplicator at rest. By a sudden movement of the rabbit, the apparatus was deranged, but the needle clearly deviated and moved. The needles were again introduced; some muscular contractions succeeded; again the needle oscillated, but so slightly as not to convince the assistants. The animal, however, soon made some very vigorous and repeated exertions, and there was no longer any doubt of the fact, for the needle now described an arc of more than two lines. The oscillations ceased with the motions of the animal, and again appeared when it moved. The animal was excited to make contractile efforts, by stimulating the nostril or irritating the nerve, and the needle immediately oscillated, and the arc it described was great in proportion to the energy of the muscular exertions which were provoked. The phenomena could, in fact, be caused at will. With four needles, double the effect could be produced than when two only were employed. In general, the intensity of the phenomena diminished with the vigor of the animal, and they were not observable after death. When two needles were placed in a nerve, and two in a muscle, the oscillations were barely perceptible. When all four were introduced into a muscle, M. David could obtain no deviation of the galvanometric needle.

Other experiments demonstrated the reason why, sometimes, the phenomena may not arise when needles were placed in a nerve. The causes of the non-occurrence of the phenomena may be either, 1st, insensibility of the nerve from its being strained, or pressed upon, in sponging it; 2d, its too great tension over the glass placed beneath; 3d, blood may cover both the nerve and needles; 4th, the perfect dryness of the nerve produced by the sponge. It is then necessary to place the nerve for a moment in contact with the muscles, and its power is restored. It is highly important that the needles and the extremities of the threads of the galvanometer should be perfectly clean.

M. David considers these experiments sufficient, 1st, to prove that organized beings have a special apparatus, which is destined to furnish an electric current; and, 2d, to show the circumstances which are required for its production. Needles implanted in a nerve which is completely separated from the spinal marrow, produce no motion in the magnetic needle: but if a nerve is experimented upon *above* the part where it has been divided from the nervous cen-

tre, an electric current will be produced, which will cause the needle to deviate. When the spinal marrow is divided between the occiput and the first cervical vertebræ, none of the nerves will give rise to any electric phenomena. Among some sufficiently obvious inferences that M. David draws from his experiments, he observes, that muscular-contraction is not produced by an inherent force in the muscular fibre, either irritability or contractility, which are purely imaginary faculties, but by the electric currents furnished by the nervous branches which the muscles receive.—*Bull. des Sciences Med. Oct.* 1830.

6. *Experiments on the action of certain substances immediately applied upon different parts of the Brain.*—M. FLOURENS communicated to the Royal Academy of Sciences, at the meeting of the 7th February last, some experiments on this subject. On successively slicing away different parts of the brain, M. Flourens found that different functions were successively abolished, and that by gradually slicing away one of these parts, the function of which it is the organ is successively abolished. Further, he has found that certain substances taken into the stomach, act as surely on the whole brain, or on particular parts of that organ, and that in these different cases, the effect of each substance upon each part is absolutely the same as that of the mechanical lesion of this part. At present he has demonstrated that, on applying immediately to the cerebral lobes and the cerebellum, certain medicinal agents, special effects are obtained analogous to those produced in the two preceding orders of experiments. Thus the essential oil of turpentine directly applied upon the cerebral lobes, gradually produces all the effects of the exaltation of the function belonging to this organ: the animal (M. F. particularly experimented on rabbits,) is agitated, moves suddenly forward, turns rapidly, and grinds its teeth, the same substance on the contrary applied to the cerebellum causes the animal to run and leap with great vivacity, without at all disturbing its other functions. The same experiments repeated with opium gave analogous results: the difference of action was almost complete. In the first experiments, it has been seen that under the influence of the action of turpentine, the functions were exalted; on applying opium, torpor of all these functions was produced. This opposition suggested to M. F. the idea of substituting after some time, the action of one of these articles for the other, and he successively observed in a more or less decided manner the effects which he obtained from each separately. From all these facts the author concludes, 1st, among different substances immediately applied upon the same parts of the brain, each has a special action, more or less distinct from the action of others; 2d, moreover this action varies for each part, as the function of that part varies, modifying the *actions* (*allures*) of the animal when acting on the cerebral lobes, modifying *locomotion* when acting upon the cerebellum. 3d. By substituting one of these substances for the other, we also substitute in certain cases the effects produced by these articles.—*Archives Générales, March,* 1831.

7. *On the Effects of Posture on the Frequency and Character of the Pulse.*—In the fifth volume of the *Dublin Hospital Reports*, we find some interesting observations by Dr. GRAVES on this subject. It has long been known that the posture of the body has a considerable influence on the frequency of the pulse. Dr. G. finds that the pulse is less frequent, from ten to fifteen beats in the minute, and stronger in the horizontal than in the erect posture, and he infers that its *maximum* of strength and minimum of frequency are at once obtained. In all diseases excepting six cases of hypertrophy with dilatation of the heart, Dr. Graves found the pulse to differ in frequency in the erect, sitting, and horizontal postures.

Contrary to his expectations, however, he found that an inverted position, the feet up and the head dependent, produced no effect upon the frequency of the pulse; its strength is however diminished, and often very considerably,

and sometimes it becomes irregular. The following are the conclusions drawn by Dr. G. from his experiments:—

1st. That the greatest difference occurs in patients labouring under fever, or in a debilitated state, in consequence of fever, or any other cause. It may amount to 30, 40, or even 50, between the horizontal and erect postures.

2d. That this difference decreases after the first quarter of an hour in most cases, but always remains considerable as long as the same position is observed.

3d. That in persons not much debilitated, the difference is much less than that stated above, and often does not amount to more than 10.

4th. That when the patient lies down, the pulse rapidly falls to its former standard.

5th. That in some the increase in frequency is greater between the horizontal and sitting posture, than between the latter and the erect; while in others the contrary takes place, so that generally the frequency in the sitting posture may be taken as a *mean*.

6th. In persons convalescent from fever or acute diseases, I find it is extremely useful to the physician to ascertain the comparative frequency of the pulse in the horizontal, and in the erect position. The greater the difference, the greater is the debility of the patient, *and consequently the more guarded must his medical attendant be in allowing him to sit up for any length of time*, particularly if the pulse, on his lying down, does not resume its usual degree of frequency.

Authors who have written concerning the effects of digitalis on the organs of circulation, speak of the difference between the pulse, as observed in different positions, as an inexplicable anomaly, and seem quite ignorant that a similar phenomenon occurs in a less degree in health, and in an equal degree in many diseases. The fact appears to be, that *digitalis*, besides a great and debilitating influence on the whole constitution, and particularly the nervous system, possesses a *peculiar* power of diminishing the frequency of the pulse; *but it is no anomaly* that, in persons under its influence, debilitated, and nervous as they always are, when it is exhibited in doses sufficient to retard the pulse, there should be a great difference between the frequency of the pulse as examined in the horizontal, the sitting, and the erect postures

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PATHOLOGY.

8. *Union of Fractures.*—Much diversity of opinion still exists respecting the precise process by which the union of fractured bones is effected. The most elaborate and circumstantial memoir we possess on this subject is Breschet's.* This distinguished anatomist made a number of experiments on dogs and pigeons, and was led to conclude from his observations that the process of reünion consisted in the following steps. 1st. In effusion into the surrounding soft parts, and gradual ossification of a layer of these parts exterior to the bones; 2d. In effusion into the medullary canal and its subsequent ossification; 3d. The formation of an intermediate substance between the fractured surfaces, which, in course of time, became converted into perfect bone.

In our sixth volume, p. 216, will be found an account of some experiments by M. Flourens, connected with this subject, and in the *Edinburgh Medical and Surgical Journal* for April last, are some very interesting observations by Mr. Syme, tending to throw some light on the process under consideration.

"That the bones are not united," says Mr. S. "merely by the ossification of their periosteum, may be proved at once by cutting them through longitudinally, when the ends are found firmly united together, and even the medullary canal filled with osseous matter. If the section, indeed, is made at an early

* "Sur la Formation du Cal." Paris, 1819.

period after the injury has been sustained, the fractured surfaces remain united; and hence Duhamel, who, from analogy, had taken up the idea that ossification of the periosteum effected the reparation just as the deposition of wood from the bark unites the graft of a tree, was confirmed in his error, because he did not extend his observations beyond the fifteenth day.

"It is confidently maintained by some, and I myself used to subscribe to the same opinion, that the new bone or callus results entirely from the old one, and is gradually completed through successive stages, in which a gelatinous matter effused from the osseous surfaces becomes more and more firm, then cartilaginous, and at last identical with the tissue from whence it proceeded. Analogy, no doubt, is in favour of this explanation; and the appearances observed in bones at a considerable distance of time after they have been fractured also tend to support it; but there are some facts which may be alleged in objection, and, as I think, afford unquestionable evidence against its truth.

"It is daily observed, in treating fractures of long bones, such as the tibia and femur, that, notwithstanding the most careful and effectual means are employed to retain the corresponding surfaces *in situ*, they remain moveable for many days, and, indeed, generally for the best part of three weeks, during the whole of which period the crepitation heard or felt by moving the limb is as distinct as immediately after the injury has occurred. The mobility usually ceases very suddenly, and the limb all at once regains such a degree of firmness as to sustain its own weight, or resist any other equivalent force tending to bend it; but if subjected to more considerable violence at this time, it gives way again at the part originally fractured. When such fractures are dissected within the first two or three weeks of their existence, the ends of the bones are found quite separate and unconnected by any intermediate substance. These facts are quite opposed to the idea, that the uniting process consists entirely in the effusion and ossification of a substance proceeding from the surfaces of the bones, in which case the mobility should diminish gradually, and flexibility continue long after perfect mobility had ceased, before the establishment of perfect rigidity.

"Case 1.—Catherine Adams, æt. 52, was admitted on the 12th of January, soon after sustaining a fracture of the right thigh-bone in its lower third by falling on her side. Pasteboard splints were applied to keep the limb steady, and then by means of the long splint of Desault, extension was effected, so as to prevent retraction of the broken surfaces, which were very oblique. Every thing appeared to be doing well until the 23d of January, when she had a long and severe rigor, and afterwards complained of general uneasiness, with the other usual symptoms of fever. On the following day, her tongue was brown and hard; her pulse frequent, but weak; and her appearance upon the whole extremely unpromising. Thinking that she would not bear bleeding, I desired that she should have her bowels freely opened by injections, and afterwards take small doses of an antimonial solution. On the 25th, she complained of her throat being very sore, and her respiration was performed with the peculiar sound which indicates œdema of the glottis. Though this symptom was very distinctly marked, it did not seem to warrant tracheotomy, as there was no indication of any severe degree of obstruction in the breathing, and the patient appeared to be sinking independently of this local disease. I therefore directed blisters to be applied to the throat, and stimulants to be given frequently. She died next day.

"On dissection, the fracture was found to extend obliquely from near the middle of the bone down to the external condyle. The muscular fibres and cellular substance in the neighbourhood of the injury were altered in colour as well as consistence, by the effusion of gelatinous matter into their texture. A kind of bag or capsule was thus formed, embracing the whole extent of broken surfaces, and containing two or three ounces of fluid blood. The parietes composing it were in some parts connected to the very edge of the bone, but in others they became adherent to it at a distance of an inch or more from the ex-

tremity, leaving a space to this extent uncovered, and apparently denuded of periosteum. When carefully examined, this exposed portion was ascertained to be covered by a thin layer of gelatinous substance, which did not possess the toughness or other characters of a membrane; and the respective surfaces of the bone had a covering of the same kind. The medullary membrane was very vascular, and more distended than usual.

"In examining the structure of this bag, I endeavoured to ascertain which of the natural tissues entered into its formation, and in what parts of it, if any, ossification had commenced. On tracing the periosteum from the sound bone, I found that where the bag adhered, that membrane became thick, and evidently continuous with its walls. It seemed probable that where the membrane had been stripped off the bone, as already mentioned, it might assist to form, in some small part, the sac in question; the great extent of which, however, was evidently constituted by the neighbouring tissues, whatever they happened to be, muscle, tendon, fat, or cellular substance, all being reduced to the same appearance internally, by vascularity of the surface, and the same consistence, by the interstitial effusion of organizable matter.

"On introducing my finger into the bag, so as to feel if there were any indications of ossification, I perceived some small grains or specks of bone, which, when minutely examined, presented a stellated appearance, and were ascertained to lie in the substance of the capsular membrane. When examined in the same way near its connection with the bone, it was found to contain much larger masses possessing osseous firmness; in order to ascertain the precise seat and origin of which, I carefully dissected the membrane where they existed, and then found that they lay completely imbedded within it, having a covering from it on both sides; also that they did not adhere to the bone, being separated from it by a thin layer of the membrane, so as to admit of a slight degree of motion; but at these parts, the shaft itself had begun to shoot out a growth of new bone.

"Case 2.—Mary Donaldson, a poor emaciated old woman, seventy years of age, was admitted on the 27th of September, on account of a compound fracture of the left leg close to the ankle. Both the tibia and fibula were shattered into many fragments, and there was a wound over the latter bone extending down to it. Pasteboard splints were applied, the limb being laid on its outer side with the knee bent; but the patient proved so unmanageable and undocile in favouring the maintenance of steadiness in this position, that I was obliged to have recourse to Macintyre's inclined plane, which answered the purpose perfectly. She made no complaint afterwards, and all her functions were performed in a natural manner. For nearly three weeks crepitus could be distinctly felt when the limb was moved, but then the bones united, the wound healed, and on the 25th of October the cure seemed to be complete. The splints were then removed, and a simple roller applied. On the 5th of November, she was dismissed with the limb perfectly straight.

"About ten days afterwards, I was much surprised to learn that she had died in consequence of some internal disease, and having procured permission to dissect the limb that had been fractured, obtained possession of the bones for their more careful examination. When divested of their muscular coverings, they presented an appearance hardly differing from that naturally belonging to them. All the pieces into which they had been broken were firmly united to each other and to their shafts, and were covered with a periosteum of usual consistence. On closer examination, the interstices between these portions were found to be occupied by a soft bloody gelatinous substance, to ascertain the precise extent of which the preparation was macerated. When all the interstitial matter had been thus separated, it was seen that the united fragments of the tibia, which were thirteen in number, constituted merely a skeleton, so to speak of the cylinder, and that the central cavity remained entirely vacant. On examining the internal surface of this imperfect shell, it was evident that an ossific process had been going on over the whole of it, and I have no doubt,

that, if the patient had lived some months longer, the bones would have become completely solid. The fibula presented similar appearances, though on a smaller scale, and the process of reunion was more nearly perfected. There is in my possession the preparation of a thigh-bone which was fractured through the neck and trochanters, and was treated by my friend Mr. George White. The patient died two months after the accident from some other cause. It now appears, the bone having been macerated, that all the broken portions are firmly united together at the edges, but that all their internal surfaces remain perfectly distinct and separate. The appearance, in short, is very nearly the same, and, I believe, would also have terminated in compact ossification, if the necessary time had been afforded."

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9. *Ischuria Renalis.*—J. Bird, Esq. relates in the fourth volume of the *Transactions of the Medical and Physical Society of Calcutta*, the following interesting case of this disease. A man, aged fifty, came into the hospital, October 18th, 1818, complaining that he made urine in very small quantity; not more than a tea-cupful being passed in twenty-four hours. Had some nausea, but no fixed pain in any part. When first attacked, which was several hours previous to the time of his admission, he felt some uneasiness in the lumbar region, and was seized at the same time with vertigo; but having taken a draught of Tinct. Opii, with Spirit. Ether. Nitros. he felt easier. I ordered him a dose of castor oil; after the operation of which, the draught before given was to be repeated.

Second day.—The oil had operated freely, but there was no alteration in the state of the symptoms. The draught was repeated several times in the course of the day.

Third day.—The sensorium appeared much affected; as marked by a great inclination to sleep, an uncollected state of mind, and loss of memory. His eyes were of a suffused yellow colour, and were slightly injected with blood. The pulse was full and slow, and there was a convulsive motion in the arm. The catheter was introduced into the bladder, which contained no urine. He was bled to the extent of xx. ounces, and after taking four grains of calomel with an equal quantity of antimonial powder, had a blister applied to the lumbar region. The blood drawn was cupped, and threw up a little buff.

Fourth day.—There was less affection of the sensorium; but the urine did not increase in quantity. A brisk purgative of calomel and compound powder of jalap being given, its effect could not be accurately ascertained. A blister was also applied to the nape of the neck.

Fifth day.—The affection of the sensorium increased; there was great inclination to sleep; and his tongue, which was brown, was covered by a horny crust. When told to show it, he did not withdraw it again until ordered to do so. Several strong purgative medicines were given without any effect.

Sixth day.—The symptoms of coma continuing to increase, and his bowels remaining obstinately immoveable, purgative glysters were given very frequently, without any advantage.

Seventh day.—The symptoms continued to gain ground, and death followed towards the afternoon.

Dissection.—*Abdomen.*—The stomach was much thickened; and its villous coat was unusually vascular. The liver, which was much enlarged, displaced the intestines, and had elongated the mesentery. The gall-bladder contained a dark ropy bile, of the appearance of tar. The spleen, which was enlarged to more than five times its natural size, was firm and fleshy. The duodenum contained much brown mucus. The colon was contracted throughout its whole extent. The kidneys were enlarged to double their usual size, and were much altered in structure, having the pelves unnaturally small, and the mamillary processes so changed, as to be with difficulty distinguished from the generally diseased mass. In short, the impression left on the mind was, that urinary se-

cretion had been performed very imperfectly for a long time previous to his death.

Head.—A general effusion of serous fluid had taken place throughout the substance of the brain, and into the lateral ventricles.

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10. *Effect of Posture in Catarrhal Affections.*—Dr. Graves, in a Clinical Lecture lately delivered at Sir Patrick Dun's Hospital, Dublin, stated, that in the epidemic cough then prevailing, (a catarrhal inflammation evidently affecting the trachea and its larger subdivisions only, and unconnected with pneumonia,) an exacerbation of the cough was constantly induced by a horizontal posture. "Many of our patients having complained," says Dr. G., "that although they coughed comparatively little during the day, while sitting up in the ward, yet on lying down in the evening they were attacked with violent and long-continued paroxysms of coughing, I became alarmed, and examined their chests repeatedly, fearing that their complaint might be complicated with some more serious pulmonary disease; I found, however, these fears unfounded, for no other affection could be detected than the catarrhal inflammation already mentioned: as these persons lay in the room where they had spent the day, and as the same paroxysms came on, no matter at what hour they went to bed, it is clear that they cannot be attributed either to a change of temperature, or to a febrile exacerbation depending on the time of day. I most carefully inquired into these circumstances, and made several experiments, from which it followed, that the exacerbation of the cough was almost solely induced by the horizontal position."

Dr. G. confesses himself unable to explain this phenomenon.—*Lond. Med. Gaz. March*, 1831.

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11. *On the Complication of Bronchitis and continued Fever.* By Dr. Graves. —Laennec and his followers are of opinion that bronchitis is the constant attendant on continued fever. "At the commencement, and most commonly throughout the whole course of the fever, the catarrh," says Laennec, "is latent, without cough or expectoration, and only to be detected by the stethoscope." The fact here announced by the justly celebrated inventor of the stethoscope, if true, would evidently be of vast importance, and would suggest important modifications in the treatment of continued fever. I must confess, however, that after a long and attentive observation of many hundred such cases, I have arrived at a different conclusion. It is true, that in the great majority of fevers accompanied by dryness of the skin and tongue, rales are more or less audible in the chest, similar to those heard in slight inflammation of the bronchial mucous membrane, and which must consequently be caused by a physical state of that membrane closely allied to that produced by slight bronchitis, namely, a diminution and alteration of the natural secretion. When we recollect that the cutaneous perspiration is suppressed during the course of such fevers, and that the tongue and fauces are evidently not less deranged in their secretions than the skin, it is more than probable that a similar derangement, from the agency of the same general cause, is at the same time produced in the mucous membrane lining the bronchial tubes, sufficient, it is true, to produce the rales already spoken of, but in its nature as much differing from true bronchitis, as the state which occasions dryness of the skin and tongue differs from inflammation of these parts. This view of the subject is confirmed by an observation of Laennec, which I have often verified, that when a crisis takes place, at the very time when the lateritious sediment shows itself in the urine, every sign (even stethoscopic) of perhaps very intense and extended catarrh, disappears at once. Now, gentlemen, inflammations do not, even in fever, disappear thus suddenly, and I have repeatedly observed that when true bronchial inflammation runs its course along with fever, it most usually remains after the crisis, and may even then prove troublesome. If, on the other hand, we adopt the supposition that Laennec's stethoscopic signs of catarrh are owing to the state

of the bronchial mucous membrane, which I have described, we can experience no difficulty in accounting for their disappearance at the period of the crisis when the cutaneous and all other secretions are so suddenly restored to their healthy standard. This conclusion is much confirmed by the fact noticed by Laennec himself, that "the inflammatory fever of nosologists—that is, the fever characterized by *a flushed countenance, moist and clean tongue, and a moist and moderately hot skin*, is of all fevers that in which the marks of dry catarrh are the least perceptible, or are even entirely absent." Another fact, equally confirmatory of my hypothesis, I have very frequently pointed out to the students when ague was prevalent in Dublin. During the paroxysms of the intermittent, the stethoscopic signs of dry and latent catarrh were frequently observable, and as frequently were totally wanting during the intermissions. All these considerations leave little doubt on my mind that Laennec was wrong in considering bronchitis as an almost constant attendant upon continued fever, a view which has misled many, and has even occasionally been productive of mischief, by making the practitioner consider as a result of local inflammation that which is a consequence of the general febrile state. Under such circumstances, I have seen blisters applied to the chest, and tartar emetic, and other expectorants, exhibited without advantage, if not with detriment to the patient.

But, gentlemen, I would not have you misunderstand me, or believe me to be of opinion that real bronchitis does not occur in continued fever, for bronchitis is a frequent concomitant of that disease, and as such claims the most attentive care on the part of the physician. In fevers so complicated, the pectoral affection, though it may not be apparently very severe, is *very rarely indeed latent;* and in this it evidently differs from Laennec's catarrh before spoken of. It may be present with very different degrees of severity, but almost invariably is attended with more or less dyspnœa and cough, besides the usual stethoscopic signs of bronchitis. In such cases, as the fever advances and the patient's debility daily augments, all the symptoms are often greatly aggravated by the diseased state of the bronchial mucous membrane, which becomes particularly distressing if the period of increased secretion into the air-tubes coïncides with a state of much general weakness; for the patient being then scarcely able to cough up the viscid mucus, it accumulates in the lungs and becomes the source of new danger, preventing the due aëration of the blood, and thus increasing the stupor and other bad symptoms. In persons who have died in consequence of this combination of bronchitis and fever, we have constantly found a considerable portion of the lungs engorged, and the bronchial tubes filled to a great extent with mucus. The engorgement corresponded in situation to the position in which the patient used to lie; and as such persons usually remain on the back, it was generally on the posterior part of the lungs. This state of pulmonary engorgement, induced partly by the bronchitis and partly by the patient's position in bed, has almost invariably proved fatal in fever, and may be known by a constant moist crepitus in the portion of lung thus affected, accompanied by a great increase of the dyspnœa. It is of great importance, therefore, to avoid the supervention of this engorgement, not only by the means usually recommended for clearing the lungs of mucus, but also by a constant attention to the patient's position in bed, which should be changed every two hours: he should be placed in succession on his right and left sides and back, and should, in the former positions, be carefully propped up by pillows. When his strength permits, he may even be supported, at intervals, in a posture somewhat approaching to sitting: his head and shoulders being considerably elevated. I can assure you that attention to this simple circumstance has been often mainly instrumental in saving life, by preventing the occurrence of pulmonary engorgement; and I have recourse to it, not only in fevers accompanied by bronchitis, but in all long-continued fevers, which are necessarily attended by great weakness; for in both, the most pendent portion of the lungs is apt to become engorged. I need not remind you that this state of lungs has been most inappropriately called by Laennec, *pneumonia morientium* I say inappropriately, be-

cause, in pneumonia, the increased quantity of blood found in the inflamed part of the pulmonary tissue is owing to an afflux of this fluid, derived from vascular action; whereas the engorgement we have spoken of is evidently the result of a debility in the vital forces, allowing the influence of gravity to operate on the distribution of blood.—*Ibid.*

12. *Poisonous Effect of the Blood of a Patient upon Leeches.*—Dr. Graves, in a clinical lecture delivered at the Meath Hospital, Dublin, and which is published in the *London Medical Gazette* for February last, related the following curious case. A woman was admitted into the hospital for an obstinate stomach affection, which had many of the characters of organic disease, but the result proved that no permanent alteration of structure existed in the stomach, for she completely recovered. This patient at one period of her complaint was afflicted with constant nausea and vomiting accompanied by considerable tenderness in the epigastrium, for the relief of which twelve leeches were applied to the region of the stomach. Shortly after they had begun to act, they fell off, and immediately died. This curious circumstance naturally arrested attention, and twelve leeches more were ordered, the precaution being first taken of perfectly washing the skin to which they were to be applied. These leeches shared the same fate as their predecessors, and this happened in several successive trials, made by way of experiment, until about sixty leeches, all previously in good health, had been thus destroyed. Of course there is no other way of accounting for this phenomenon, than by supposing this woman's blood was so different in composition from human blood in general, that it proved poisonous to these animals. No accurate chemical experiments were made to ascertain what was the nature of this poisonous principle, but it may be observed that the physical properties of her blood presented nothing remarkable, its serum and crassamentum having the ordinary colour, consistence, and smell. Neither could this quality have been owing to any medicine she was at the time using, for the blood continued to act as a poison to the leeches for several days after she had altogether left off medicine. It was suggested by some of the students, that the poisonous property might have arisen from a small quantity of hydrocyanic acid which she had been taking, but the remark just made disproves the truth of this hypothesis. Besides, we have frequently had patients in the hospital in whom much larger doses of hydrocyanic acid were not followed by this state of the blood. In reference to this it may be also observed, that the lower orders of animals seem much less susceptible of the effects of certain poisons which act upon the nervous system, than the higher orders.

13. *Causes of Death in Membranous Inflammations.*—We find in the *Annales de la Médicine Physiologiques*, some exceedingly interesting observations by M Broussais on the causes of death in membranous phlegmasiæ, and on the softening of the stomach in acute inflammations, corresponding to the essential fevers of nosologists. The following is a summary of the conclusions to which M. B. has arrived.

1st. Membranous phlegmasiæ, especially those of the abdomen, and particularly gastritis and enteritis, often produce at their very commencement, congestion of blood in the brain and spinal marrow, which if not removed, may destroy life, before the primary disease has run through its stages, and even in a very short period, or rather constitute the prominent affection, as occurs in children, in whom disease of the brain is commonly caused by gastro-enteritis.

2d. During the course of these diseases, there exists always a sympathetic irritation of the brain and spinal marrow, by which the acceleration of the circulation and respiration is increased, the intellectual functions are impeded, the sensations perverted, the voluntary muscles are incapacitated from performing their proper motions, the action of respiration is rendered irregular, in a word, by it is caused all the nervous symptoms by which the membranous inflammations are accompanied, even under the mildest form

3d. Where the inflammations under consideration have produced extensive morbid alteration of the mucous tissues, and menace a fatal termination, nervous symptoms present themselves of a more serious character than those noticed above. These symptoms assume the form of delirium and convulsions where the irritation affecting the brain is seated principally at its periphery—they assume the form of coma when the irritation becomes stronger in the centre of the brain, and tends to produce the exhalation by which the ventricles are filled and distended.

4th. It is this irritation, the traces of which always indicate a degree of inflammation that terminates the life of the patient, by precipitating, as we believe, the enervative movements, whenever death is not induced either by compression of the brain, by rupture of its fibres, by hæmorrhage, or by compression or considerable morbid lesion of the lungs or heart. We may even add that peritonitis, whether it be produced or not by the perforation of the digestive tube, causes death only by the disturbance which it induces in the enervation of the encephalo-rachidien centres, at least excepting when there does not occur a copious effusion of blood into the cavity of the peritoneum.

5th. Finally, we believe that our observations will permit us to conclude that the destruction of the mucous membrane of the digestive tube in the acute diseases which are or have been denominated *essential fevers*, is always the effect of inflammation; and if at certain points we find this membrane, or the parts surrounding those spots at which it has been destroyed, in a state of atrophy and pale, this arises from the blood having been attracted by irritation towards some other part in the last hours of life, or from aqueous fluids by their presence or passage, having carried away the globules of blood and macerated the tissue already weakened and disorganized by the inflammation.

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14. *Hysteria produced by Prolapsus Uteri.*—Dr. SUFFERT relates in the *Journ der Practischen Heilkunde*, for March, 1830, the case of a woman, aged forty-eight, who had been affected for a long time with hysteric paroxysms, which had resisted the usual medicines. She was also affected with leucorrhœa, periodical dysuria, pains in the abdomen, disordered digestion, cephalalgia, tumefaction of the feet, &c. On examination, a prolapsus of the uterus was discovered: a pessary was applied, after which the hysteria and all the other symptoms disappeared, and did not return.

The case presented another peculiarity. When the patient withdrew the pessary to clean or change it, she experienced an almost unconquerable desire to sleep

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15. *Cases of Hemiplegia.*—The following cases related by Dr. LAW in the fifth volume of the *Dublin Hospital Reports*, are exceedingly interesting, as showing that opposite conditions of the brain will give rise to the same symptoms during life, and the latter is remarkable for having the brain on the same side with the hemiplegia more diseased than the opposite one; which is contrary to the opinion of many pathologists, that paralysis of the upper and lower extremity must follow disease of the optic thalamus and corpus striatum of the opposite side. In connexion with these cases we refer to those given in the preceding number of this Journal, p. 221, and in Vol. V. p. 484 and 5.

CASE I. *Hemiplegia unaccompanied by any Structural Change in the Brain.*—John Stringer, aged thirty-four years, five years ago, while serving in the East India Company's service, received a bayonet wound in the forehead over the left eye, which penetrated the bone and gave rise to a sore which occasionally healed and broke out again; since the infliction of the wound he has never been quite free from uneasiness in his head; about six months since, while in bed, and without any previous warning, he was seized with paralysis of the right side and loss of speech, he partially recovered from these when he got the fever, for which he was admitted into the hospital; he exhibited the following symptoms: quick pulse, tongue coated with yellowish fur, skin jaundiced and

burning hot, epigastrium and right hypochondrium tender on pressure; a sore about the size of a six-pence over the left eye-brow, with exfoliation of the bone to such a degree as to expose the dura mater, complete paralysis of the right side with loss of speech; for a few days he showed some signs of amendment, but suddenly he became insensible, in which state he continued until death.

Dissection.—The portion of dura mater corresponding to the exfoliated bone seemed to have its fibrous lamina destroyed, while its serous lining was thickened and of a bluish colour; the subjacent brain had undergone no morbid change; there was considerable effusion on the surface of the brain. All the thoracic viscera were healthy; the liver enormously enlarged, weighed ten pounds, but did not appear to have its structure altered; the spleen, nearly three times its natural size, exhibited a strange appearance; its superior third was converted into a yellowish, soft, cheesy substance; the middle third had undergone that breaking down, that softened condition, which prolonged ague often produces in this organ; the inferior third had retained its natural organization and consistence; the mucous membrane of the stomach was deeply vascular.

CASE II. *Hemiplegia with Ramollissement in both Thalami Optici and Corpora Striata.*—Harris, a watchman, of rather irregular habits, while in the full enjoyment of health, had an apoplectic seizure, from which he lay for a considerable time in a state of stupor, but was at length roused by copious bleeding; his left side was quite paralyzed, and his speech lost; in this state he was carried to hospital, where he continued for two months with a constant low typhoid fever; during this time he had occasional determinations of blood to the head, which were subdued by leeches and cold lotions; he sunk under the fever without the constitution seeming to make the least effort towards rallying. Examination of the body discovered extensive softening of both optic thalami and corpora striata; the change of structure was more marked on the left side than on the right.

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16. *Case of Tumour in the Brain.* By ROBERT LAW, M. D.—A boy, aged thirteen, was admitted into Sir Patrick Dun's Hospital, Dublin, for a distressing palpitation of the heart, which was much increased by walking quickly, or by ascending a height: his respiration was very laboured and oppressed; from the inactive life which he has been obliged to lead, he has become very full and plethoric. Before his admission into hospital he had two convulsive attacks which were preceded by a dull pain in the left side of his head, from which he has never since been quite free, though it gives him very little uneasiness. The treatment was exclusively directed to the affection of the heart. When he had been about six weeks in hospital he was seized with an epileptic attack, followed by feverish symptoms, which caused him to be removed from the chronic ward to one of the fever wards, when he came under my care: he had a peculiarly dull, heavy, lethargic appearance, and complained of a strange sensation in his heart; the pupils were unequally dilated, the left more than the right; not much heat of skin, nor acceleration of pulse; tongue loaded with yellowish fur; notwithstanding the application of leeches to the temples, cold lotions to the shaved head, a blister to the nape of the neck, and two grains of calomel every third hour, he fell into a complete state of coma, which was attended with frequent convulsions affecting principally the left side, and he died on the fourth day.

Dissection.—Considerable turgescence of the vessels on the surface of the brain. In the substance of the right hemisphere of the brain, and about an inch from the surface, there was a tumour as large as a hen's egg, hard and firm in its structure, while the brain in which it was imbedded was soft and diffluent. It was of a greenish-yellow colour. The left ventricle was distended with limpid serum; the right ventricle contained no fluid.

The pericardium adhered to the heart through the medium of a dense ad-

ventitious membrane two lines in thickness, the heart larger than natural, lungs, healthy, liver much increased in size, without any apparent deviation from its natural structure; mesenteric glands unusually developed. A section of the tumour exhibited a uniform consistence and colour.

The preceding case proves to us the difficulty of ascertaining the existence of organic disease in the brain, and how imperfect a measure of internal mischief are external manifestions, for we cannot but suppose that this tumour, the result of slow chronic inflammation, had existed long before any constitutional derangement could have led to any suspicion of its existence; it further confirms the pathological fact, that any organ, no matter how essential to life, can submit to considerable alteration of structure, provided that such alteration is so slow and gradual as to admit of the economy's accommodating itself to it, the effusion into one ventricle only, is remarkable.—*Dublin Hospital Reports, Vol. V.*

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17. *Case of Constitutional Disease, arising from a Simple Local Irritation.*—The following case, related by Dr. Ryan, in the *5th Vol. of the Dublin Hospital Reports*, is extremely interesting, as *proving that a morbid poison may be generated in consequence of a local irritation, and that this poison may contaminate the entire system;* and therefore tends to overturn some of the unphilosophical notions even to this day entertained by some respecting the necessarily specific nature of a number of diseases. The subject of this case was a gentleman, aged thirty-eight, of florid countenance, indicating a highly sanguineous temperament, rather corpulent, and not of very active habits. He had previously enjoyed good health, unless from occasional attacks of cynanche tonsillaris. He had been, during the past winter season, more than usually employed in anatomical pursuits, and about three weeks before he wounded himself with the pin, he received a slight cut on the thumb whilst examining a subject that had died of diseased hip-joint; the wound, however, had healed speedily and well. He has been married twelve years, has had nine healthy children, seven of which are living, *and by no accident or possibility could he have contracted any syphilitic taint.*

About three weeks after the first appearance of the fungus, the lymphatics of the forearm became inflamed; the inflammation extended along their course to the axilla, sixty leeches were applied, and the inflammation was subdued. About a month afterwards, an enlarged gland appeared in the axilla, which was also resolved by the application of leeches.

On the 27th of September the abscess burst, and on the 29th he went to the country emaciated and debilitated to an extent not to be explained by the effects of so small a local disease. On the 10th of October his throat felt sore. with some trifling difficulty of swallowing; he returned to Dublin, his throat was examined, and no appearance of disease was discovered, except a very slight blush of inflammation, which soon passed away. Towards the latter end of October, an eruption of scarlet patches came out on his forehead, forearms, and slightly on the shoulders and inside of the thighs. Sarsaparilla and the nitro-muriatic acid were now prescribed, and taken in considerable quantity In this state he remained until the end of December, his throat being on one day free from uneasiness, and perhaps on the next extremely sore, the eruption sometimes disappearing entirely, sometimes showing faintly under the cuticle like fading measles, and sometimes of a bright red scarlet colour. He continued taking the sarsaparilla up to this period, with warm baths twice a week, and his general health had been improving since the sore on the thumb had healed. He got weary of taking medicine, and now discontinued it, and trusted to a nutritive diet, and the use of port wine.

Early in January, 1829, an anomalous kind of eruption appeared on his scrotum, and produced great annoyance, it was so intolerably itchy, but it sealed off and disappeared in the course of a week, without the adoption of any medical treatment whatever. On the 15th, a tender tumefaction arising

from periostitis was discovered on the left tibia, on the 19th it disappeared. On the 2d of February, an eruption similar to what had before appeared on the scrotum reäppeared; it also went away without the use of medicine. During the months of March, April, and May, his throat could never be considered in a state of health, and exhibited so much variety of symptoms, both as to appearance and pain, as rendered the case inexplicable as it was curious; sometimes when there was no trace of inflammation visible, the pain would be excessive. An erythematous redness was, on the other hand, often suffused over the soft palate, and occasionally an appearance resembling abrasion of the surface, while there were no indications of exacerbation of pain. Sometimes whilst speaking, his voice would suddenly fail, and a paroxysm of cough interrupt his articulation; the cough was hard and unattended by expectoration, he would often commence eating, suffering under extreme torture in every attempt to swallow, and after a few moments he would perform deglutition without the slightest pain. In a word, these symptoms came and went alternately without any assistance being sought from medicine. But this uncertain and precarious state of health could not be borne any longer, and he determined to try the effects of mercury, though contrary to the advice of his friends, and took two grains of calomel daily for four days, when he was seized with a cough, accompanied with some hæmoptoe. The mercury was discontinued immediately, and never resumed: his mouth was made slightly sore by this quantity, his gums became spongy, and his breath foul. All the symptoms gradually and slowly declined, and he is now occasionally visited by the following.—Wandering pain in the hip-joint of the right side, and weakness which prevents exercise on foot to any considerable extent. Some few pale and almost indistinct stains of eruption on his forehead after exercise. Some broad, flat patches of eruption of a scarlet colour, but not always of the same intensity, on the back of the hands: during the last winter the skin on the palms of his hands was hard and horny, and the natural lines appeared like fissures; this has now disappeared, His throat never has been sore since he took the calomel.

MATERIA MEDICA AND PHARMACY

18. *Atrophy of the Mammæ produced by Hemlock.*—Professor D'Outrepont, of Würzburgh, relates some curious cases illustrative of the effects of hemlock in galactirrhea. The morbid profusion of milk in the breasts, in this complaint is accompanied frequently with hysteria, hectic fever, general emaciation, with extreme dryness of skin, and impairment of the mental functions. Menstruation is suppressed, and the patient becomes sterile, or at least less apt to conceive. The local remedies commonly employed are more or less prejudicial· constitutional treatment is found to be more efficacious. Light purgatives, such as the neutral tartrate of potash in smart doses, with diuretics occasionally, and diaphoretics, are attended with good effect: bitters too, and chalybeate waters taken internally, are much to be recommended Yet cases occur in which the secretion of milk, continuing after the weaning of a child, becomes extremely difficult to be managed; and *specifics*, in consequence, have been tried by many physicians. Hemlock has been had recourse to in a special manner. Its action on the mammary glands is remarkable; for it not only depresses their functional powers, but, if applied for any length of time, produces a complete atrophy of the mammæ, to the full extent of rendering them barren in all future pregnancies. This has been already noticed by Professor Benedict, of Breslaw; but two cases of recent occurrence, which M. d'Outrepont adduces, may be briefly adverted to in illustration.

Case I. An actress of much beauty was troubled for several months after her confinement with the excessive fulness of her bosom, together with a superabundant secretion of milk. All the usual remedies were tried in vain. At length

her physician ventured to prescribe for her a weak infusion of hemlock, which she used for two days. The lactation suddenly stopped, but her breasts wasting away, the lady became very uneasy. Shortly after she became pregnant again, but no symptom of activity about the mammary glands could be perceived. During her confinement there was a slight fulness, and a few drops of milk were elicited; but the symptoms presently ceased for ever.

CASE II. The mother of four fine children, all nursed by herself, had given suck to the youngest for fifteen months. Having weaned it at last, a flow of milk continued to the breasts in such a quantity that the lady actually lost four litres of it, (about 8½ pints,) every day. The fluid was perpetually running from her, and it was necessary to wrap the breasts in large napkins, which had to be constantly changed. The menses were suppressed, and she could no longer become *enceinte*. This state of things continued for four years, during which time every remedy that physicians could devise was made trial of. M. d'Outrepont, on taking her in hand, found that she was not in the least weakened by the continual drainage. His first object was to restore, if possible, the menses; and in this, fortunately, at the end of five months, he was successful, though the lactation still partially continued. The lady was very impatient, and M. d'O. was induced to try the hemlock; he gave her a grain of the extract three times a day. In seven days the discharge of milk was altogether stopped: the breasts however, were considerably reduced in volume. Her menses came on at their regular period, but on their cessation the galactirrhea recurred afresh. The lady now wishing to proceed effectually about the work, helped herself to seven grains instead of three per day. The effects were but too soon observable: her breasts became emaciated to such a degree that nothing remained but baggy flaccid skin; menstruation went on regularly enough, but lactation never returned, nor was the lady ever pregnant more.

It may be observed, with reference to the two cases here related, that hemlock seems to produce atrophy of the mammary glands only in women who are suckling, just as ergotted rye tends to produce contraction of the uterus only in women who are in a state of pregnancy.—*Lond. Med. Gaz. from Gem. Zeitsch. fur Geurtskunde.*

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19. *Dangerous Effects of Inhaling Ipecacuanha.*—A man who was employed for some hours in pulverizing the root of ipecacuanha, being affected with cough and coryza, contrived to inspire or swallow in the course of his work, a considerable quantity of the dust which he raised. Presently after he was seized with vomiting, and a great difficulty of breathing, almost amounting to suffocation. He was bled to ten ounces, and ordered assafœtida, with extract of belladonna. He got better, but in five hours the symptoms recurred more violently than before, attended with a spasmodic stricture of the larynx. M. LERIG, *pharmacien*, sensible that tannin precipitated emetine, administered to the patient a decoction of the leaves of uva ursi, combined with the extract of rhatany. This was followed by an immediate remission of the worst symptoms. In the course of an hour the man could freely breathe, and was able to go out of doors on the second day; but five days altogether elapsed before he was quite free from dyspnœa.—*Ibid, from Rust's Magazin.*

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20. *Medicinal Effect of the Elaterine, the Active Principle of the Elaterium.*—Mr. MORRIES relates, in the *Edinburgh Medical and Surgical Journal* for April last, the following experiments instituted to ascertain the medicinal properties of the eleterine, the mode of preparing which article will be found in our department of chemistry.

"To one rabbit Mr. M. gave a tenth of a grain in the form of pill, which at the expiration of twelve hours produced little effect, except some tenderness of abdomen. Twenty-four hours after the first dose, he administered a second in solution, and in six hours afterwards the animal appeared in great pain, having laborious breathing and other symptoms of general inflammation. At

eleven at night, thirteen hours after the second dose, and thirty-seven after the first, it died, having neither passed feces nor urine during the whole period.

"On opening the body some hours after death, the stomach was found nearly empty and much enlarged, with increased vascularity towards the pylorus; the orifice was contracted, and the whole mucous membrane was softer and more vascular than natural. The lungs were much inflamed, and in some spots transparent and pulpy. The rest of the viscera did not seem at all affected.

"The next rabbit to which Mr. M. gave elaterine had no evacuation for three days; at the end of which period he gave it a fifth of a grain, which proved fatal in two days. In the course of the second day it passed a considerable quantity of milky urine and some feculent matter.

"The only morbid appearances were increased vascularity and thickening of the coats of the stomach, with softening of the mucous coat. The lungs were not so much altered as in the first rabbit, but were obviously inflamed to a considerable extent.

"The effects on man are similar to those of elaterium itself, viz. increased secretion of urine, nausea, vomiting, and fluid stools.

"To a person in perfect health a twentieth of a grain was given, which at the end of two hours produced vomiting and copious dejections. In the Royal Infirmary it was tried by Dr. Christison in four cases, in doses of a tenth of a grain. In two of them vomiting and purging were produced, in a third griping, and in a fourth no effect. In these cases Mr. M. attributes the uncertainty of its effect to its having been made up in the form of pill, as, from trials since made by Dr. Duncan in the clinical wards of that institution, with an acidulated solution, a twelfth or even sixteenth of a grain has been found a sufficient dose for an adult.

"The formula which has been found to succeed most completely is the following:—℞. *Elaterinæ, gr. i. Alcohol ℥j. Acidi Nitrici, gtt. iv. Solve. Sumat. æ. ʒss. ad gtt. xl. in aquæ Cinnamomi ℥ss.*

"In a case of anasarca, Mr. M. had an opportunity of trying its effects, and found it at least a very useful purgative, the patient always expressing himself much relieved after its operation."

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21. *Improved Formula for preparing Red Precipitate Ointment.*—When red precipitate is finely powdered, it becomes of an orange colour. Many apothecaries are deterred by this change of colour from powdering the precipitate sufficiently fine, whilst it induces others to add to their ointment, vermilion, to give it what is supposed to be the proper colour. The more finely powdered, however, the red precipitate is, the more active will it be, and the more fit for application, especially when required for so delicate an organ as the eye. The following directions, therefore, given by Mr. Thomas Clark, in the *Glasgow Medical Journal*, for November, 1830, for preparing the red precipitate ointment, seem worthy of adoption. "To attain," says Mr. C., "a proper consistence in the ointment; to keep it from spoiling; to fix upon a strength more easy for computation, and to exalt and render more uniform the powers of the red precipitate, I venture to propose the following simple practical formula "Take of red precipitate, prepared by nitric acid; good yellow wax, of each a drachm; prepared lard, an ounce. *Rub the red precipitate till it becomes orange.* Then mix it with a little of the lard. Mix also the remainder of the lard with the wax, and melt them together. When the latter mixture is removed from the fire, and has begun to harden, add to it the former mixture. Stir the whole together till it cool."

In this process, Mr. C. says, that the part most likely to be negligently performed, is the rubbing, and that not more than one or two drachms should be put into the mortar at a time

PRACTICE OF MEDICINE.

22. *On the Employment of Atmospheric Air as a Mean of Diagnosis, Prognosis, and Treatment of Deafness occasioned by Chronic Diseases of the Eustachian Tube* By. M. Deleau, Jr.—In one of the late Nos. of Majendie's journal there is a long memoir on this subject, said to be founded on much practical observation and experience; and as we have not received that work we copy the following notice of it from the *Medico-Chirurgical Review* for April last. M. Deleau observes, that every time we inspire there is some introduction of air through the Eustachian tube into the cavity of the tympanum. This, he thinks, may be proved by the sensations of any individual who inspires strongly on going from a warm to a cold air. He will then feel the cold in the interior of the ear. In the act of sneezing and blowing the nose, the access of air to the cavity of the tympanum is facilitated. A person burst the membrana tympani by violent straining at stool. When a person is partially deaf from cold, the hearing is bettered by blowing the nose. These and various other considerations, M. Deleau thinks, authorize us to conclude that the delicacy of hearing depends in a great measure on the free circulation of air in the cavity of the tympanum through the Eustachian tube—and consequently that, when this passage is obstructed by any means, the want of fresh air in the said cavity becomes a source of deafness.

M. Deleau alludes to the fact that hearing is not affected by perforation of the membrana tympani, until inflammation arises, which it always does after lesion of this auditory diaphragm. He conceives that the motions or vibrations of the membrana tympani contribute to move the air in the cavity of the ear, and thus secure its renovation. So the presence of wax in the meatus auditorus causes deafness, not only by intercepting the sound, but by depriving the membrana tympani of its elasticity and motions, and thus preventing the renovation of air in the internal ear. Polypi and chronic inflammation of the auditory passages produce the same effect. Among the causes of deafness may be remarked tumefactions of the tonsils, which obstruct the Eustachian tubes, and prevent the access of air to the internal ear. This effect is particularly observable in children, after measles, scarlatina, and inflammations of the air-passages. The same effect is also observable in people of all ages, after or during diseases about the throat which obstruct the Eustachain tubes.

The author then proceeds to remark that it is only in chronic affections of the ear, that we should think of injecting warm air into the Eustachain tubes. This operation is to the ear, he observes, what catheterism is to the urethra and bladder. Inflammation, he thinks, cannot subsist long in the Eustachian tube, without producing more or less of stricture in that canal. M. Deleau avers that he is able to recognise the physiological and pathological condition of the Eustachian tube and cavity of the tympanum, by means of air thrown in through a gum-elastic tube—and that by the nature of the sounds which are produced by this introduction—by the effects resulting in respect to audition—and the sensibility of the parts to air.

He informs us that, if air be thrown into the Eustachian tube of a person in health, the individual immediately claps his hand on the external ear, and feels as if water were injected into the meatus auditorius, with all the strange and tumultuous noises thence resulting, occasioning some alarm in his mind. M. Deleau says, that if the ear of the operator be applied to that of the person operated on, the noise appears to be reverberated on his own tympanum and resembles the distant sound of a cascade, or a fall of rain in a wood.

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23. *Cases of Paralysis cured by Strychnia.*—Two cases illustrative of the remedial action of strychnia on the motor nerves, where the sensibility remained unimpaired, were communicated to the College of Physicians of London, by

Dr. A. T. Thomson. We take the following summary of them from the *London Medical Gazette*, for April last.

Case I.—A lady, æt. 70, of spare habit, was attacked with hemiplegia of the right side; the power of motion was entirely gone, but the sensibility of the side was unaffected. After evacuating the bowels freely, the use of the acetate of strychnia was begun in doses of a sixteenth part of a grain, and repeated every six hours, the dose being gradually increased to a quarter of a grain, when tetanic convulsions supervened, and the medicine was discontinued. In a few days after the strychnia had been commenced the lady regained the power of raising the arm, and in ten days she could move the leg. After the supervention of the tetanic convulsions she improved very rapidly, and regained nearly as much voluntary power over the muscles of the affected side as she had enjoyed prior to the attack.

Case II.—A medical man from the country, having occasion to visit London, was seized with hemiplegia while walking in the street. He was freely bled by cupping, after which he recovered the power of moving the limbs. Purgatives were now given, which acted so briskly as to produce great exhaustion, during which he fainted. The arm then relapsed into his paralyzed state as to motion, but its sensibility remained unimpaired. Dr. Thomson saw him on the following day, (June 14th.) The arm was entirely and the leg partially paralyzed. After a dose of calomel and a purgative draught, the use of strychnia was commenced in the following manner:—℞. Strychniæ, gr. ii.; Aceti distillati, f. ℥ss. solve.—℞. Liquoris strychniæ acetatis, ♏xx.; Infusi corticis aurantii, f. ℥iss. Ft. haustus bis in die sumendus, M.—℞. Ammoniæ carbonatis, ʒss.; Vini colchici, f. ʒiss.; Misturæ camphoræ, f. ℥vi. Fiat mistura cujus cochlearia tria majora mane nocteque sumantur.

In addition to the above, the bowels were kept open by means of colocynth combined with camphor, and on the 17th, the quantity of the solution of strychnia was increased by ♏v. the draught being taken three times a day. By the 23d some improvement was perceptible, and the paralyzed leg was under the influence of the medicine, being on the "full stretch" at night, with slight twitchings. The quantity of the solution was again increased by ♏v. and from this time the improvement was stated to have been progressive. July 6th he was able to walk with the aid of a stick, to use the arm, and to articulate as well as ever. He returned home, a distance of 190 miles, and bore the journey well. The medicine was afterwards increased till he took three-fourths of a grain, three times a day, when it brought on vertigo, with tetanic spasms, which led to its gradual diminution, and at the end of two months it was entirely omitted.

Nov. 30th.—The patient is stated still to be *recovering*.

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24. *Case of obstinate and extensive Psoriasis successfully healed.* By William West, M. D.—In June, 1829, Mr. H. W., aged twenty, of a robust constitution, was attacked by psoriasis, which first made its appearance on the lower part of the back, then extended to the thighs and legs, and at last covered the scalp, the whole of the body and extremities, with the exception of the face and hands. This eruption did not at first excite much uneasiness in his mind, as he thought it would go off spontaneously, but when he saw it spreading more and more every day, he applied to me for advice.

I prescribed Plummer's pill, and the application of an ointment composed of a mixture of tar, citrine, and sulphur ointments, a mode of treatment I had found effectual in other cases of this disease. The eruption however still gaining ground, he had recourse to sulphur-vapour and artificial Barege baths, which he persevered in assiduously for nearly three months with little permanent improvement, although he at the same time took a considerable quantity of the liquor arsenicalis internally, in the manner advised by Biett, and had occasionally tried the effects of a lotion of tincture of iodine diluted, and some other reputed specifics.

At last I consulted Dr. Graves, who advised the antiphlogistic method of treatment recommended by Dr. Duffin, together with a perseverance in the arsenical solution, after the inflammation had been reduced by venesection, aperients, and low diet. We had recourse to these remedies, and continued to apply them for many weeks, but without relief, as the disease, although occasionally mitigated, assumed its former degree of violence, the moment the patient took exercise, or in the slightest degree deviated from the use of vegetable diet: under these circumstances he naturally became impatient, complaining that his strength was much reduced, while little or no progress had been made in curing the disease.

It was now proposed to omit the use of all remedies for some time, until he should have regained his strength, and his constitution have recovered from the impression made on it by the arsenical solution, &c. &c., when we proposed to recommence the treatment, but in a different and more energetic manner.

Dr. Graves observed, that a strict adherence to the antiphlogistic regimen is much more readily enforced when the patient is confined to bed, than when he is allowed to go about, and that the constitution is much less injured by the antiphlogistic treatment, which consequently can be pushed further, and with more effect; that confinement to bed has also the advantage of guarding the skin from all sources of external irritation, and by tending to keep it in a perspirable state accelerates the cure.

Our patient, a young man of active habits, was, but with difficulty, induced to submit to this confinement. He was placed on a cooling and scanty vegetable diet, was bled several times, and his bowels were kept open by a purgative electuary consisting of cream of tartar and electuary of scammony. The good effects of this treatment soon became apparent; the redness of the affected parts diminished rapidly, the formation of scales decreased in the same proportion, and in less than five weeks he was almost completely freed from a disease which had lasted more than six months, and had resisted so many active remedies: he has not since had any appearance of relapse, nor is there any mark or discoloration of the skin where it had been the most severely affected.

As those affected with psoriasis and lepra are generally persons of strong constitutions, confinement to bed will generally be resisted as unnecessary and irksome: when, however, the disease is general over the surface of the body, and does not yield to the usual plans of treatment, we may have recourse to it with much advantage.—*Dublin Hospital Reports, Vol. V.*

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25. *On the Energetic Contractions of the Heart as a guide in the employment of Venesection.*—It has long been acknowledged that the pulse cannot always be considered as a sure guide in the employment of venesection; an operation which is often necessary even when the state of the pulse seems to contraïndicate its employment. "In cases of this sort," says Laennec, "the stethoscope affords a rule much surer than the pulse: whenever the contraction of the ventricles is energetic, we may bleed without fear; the pulse will rise. But if the contractions of the heart are feeble, although the pulse still retains a certain degree of strength, we must be cautious respecting the employment of venesection."

Dr. Graves in a late clinical lecture, delivered at Sir Patrick Dun's Hospital, Dublin, and a report of which is given in the *London Medical Gazette*, for March last, stated, that for aught he knew, the latter proposition might be correct, but he decidedly denied the truth of the assertion, that whenever the contraction of the ventricles is energetic, we may bleed without fear; an assertion, he says, so much at variance with the results of his experience, that he rather thinks it must have been the offspring, not of observation, but of theory. "In the first place," says Dr. G. "in persons who have hypertrophy and dilatation of the heart, the ventricular contractions will be energetic often until a short period of their death, and under circumstances in which venesection would be totally inadmissible. Of this I have lately witnessed two examples,

and one of them made a deep impression upon my mind, as, misled by the precept of Laennec, I was induced to bleed the patient, attending only to the violence of the heart's pulsations, and not to the general symptoms. In this case, the man died in the course of a few hours after the venesection. Dissection, indeed, revealed lesions which proved that death was inevitable under any mode of treatment; but still that event was no doubt accelerated by the bleeding. Nor do diseases of the heart form the only exceptions to Laennec's rule; for I can assert, in the most positive manner, that I have seen cases of pneumonia in which the heart's pulsations continued violent until within a short time of dissolution: so much so indeed, as to induce the erroneous belief in myself and other medical attendants, that this organ was in a state of hypertrophy and dilatation; and yet it was found, after death, to be in every respect healthy. In these cases, the extent of pulmonary hepatization which was detected on dissection, together with the shortness of the interval which elapsed between the time when we observed the heart's pulsations to have been so violent and the fatal termination of the disease, made us rejoice that no further use of the lancet had been made; as the patients' friends would have most probably attributed death to the untimely loss of blood. I am the more anxious, gentlemen, to impress upon you these facts, because the language in which Laennec expresses himself upon this subject is so strong. His concluding observation is as follows. "The certainty and facility with which the cylinder indicates the propriety of blood-letting in such cases as those above-mentioned, (which have been hitherto considered the most difficult in practical medicine,) appears to me to be one of the greatest advantages to be derived from the employment of this instrument. It is certainly of the most *general application*, as *it refers* to the employment of one of our therapeutic measures, which is the most ingenious or the most useful of any, and which may be had recourse to in almost all diseases."

It is with regret I find myself obliged to differ, on this *practical point*, from one to whom our science perhaps owes more than to any other author who ever lived.

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26. *Case of Acute Rheumatic Neuralgia of the Diaphragm.* By Dr. Coudret, interne à L'Hotel Dieu.—Mr. C. himself was the subject of this case. He is about 29 years of age, of nervous temperament, but enjoying good health; he had been subject, for some time, after exposure to cold in the amphitheatre, to slight intercostal pain in the left side, occasionally exchanged for pains of a colicy nature in the bowels—for coryza—and for cynanche tonsillaris. On the 28th January, 1830, when the temperature was 12° of Reamur below zero, he was imprudent enough to have his hair cut close, immediately after which he became affected with slight bronchitis and some inflammation of the tunica conjunctiva. On the 8th of February, these affections being still in existence, he was exposed, while warm to a current of cold air, and thence repaired to the Hôtel Dieu, where he did not, at first, experience any particular inconvenience. At 5 o'clock in the afternoon he dined, though not with appetite. At 8 o'clock, he experienced a febrile horripilation, general malaise, heaviness of head, pain in his joints, disinclination to motion. Soon after this a shiver was felt, the coldness being succeeded by febrile reäction, violent pain in the limbs, the loins, and head, &c. The night was very restless, the pains, though general at first, being concentrated ultimately in the left lumbar region, and at the lower part of the chest on the same side. Next day, 9th February, the skin was still dry and burning—the restlessness incessant—head-ache intense—feeling of great sanguineous congestion about the face—tongue pasty, but not red—thirst considerable—some nausea—urine pale—bowels costive—cough, with catarrhal expectoration—the pain in the loins and side increased by the act of coughing. On percussion, the chest was every where sonorous. At each effort to inspire, the patient found himself checked by a sudden and violent pain, apparently in the situation where the diaphragm is attached to the

false ribs of the left side, and also to the spine. He conceived that he felt this same pain in the tendinous centre of the diaphragm, whence it appeared to radiate along the course of the left diaphragmatic nerve to the neighbourhood of the clavicle of that side. The act of turning, the least effort to breathe, to expel the urine, to eructate, or blow his nose, increased this pain to exquisite torture. His common respiration was also short and embarrassed. Lastly, he felt a sensation in his left arm similar to what is described by those who labour under angina pectoris. Nothing was felt about the right side of the chest. Careful pressure was made on all parts of the abdomen, but no uneasiness was thereby produced. These phenomena convinced the patient that the disease was not pleuritis; but that the seat of the malady was the diaphragm. The fever was now very acute, the pulse full, hard, and quick—in short, every thing indicated the necessity of venesection. His friend, who was with him in the Hôtel Dieu, immediately bled him to a large amount, without producing faintness. The blood was rich, but very little inflamed. Feeling some nausea, he took several glasses of warm water, and cleared his stomach, but without bringing up any remains of food, or any bile. He now felt better, and had a mild perspiration. But the pain above-described continued, and the pyrexial symptoms were soon renewed, with discontinuance of the perspiration. Thirty-five leeches were now applied to the anus, followed by a hot poultice to the same, and also to the feet. These means completely removed the head-ache, and much of the general malaise—the perspiration was reproduced—and he would have experienced some repose, had not the pains in the region of the diaphragm continued to harass him incessantly. He now balanced between the application of 40 or 50 leeches to the chest, or sinapisms to the same part. He determined in favour of the latter—and managed them with great dexterity, contriving to keep up a constant counter-irritation over the left side and back of the thorax, without inducing vesication. Two days of this discipline gave complete relief to his sufferings. On the 12th of February, he was free from complaint excepting debility.

The author thinks, and we are inclined to agree with him, that the phenomena which he has described, and severely felt, indicate a rheumatic affection of the diaphragm—a disease rarely delineated by medical writers, probably on account of the inability of non-medical patients to accurately ascertain the seat or kind of their own dolorous sensations.—*Med. Chirurg. Rev. Oct.* 1830, *from the Journal Complémentaire.*

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27. *Case of Hæmoptysis, showing the Utility of Small Bleedings in the Treatment of that Disease.* By J. Cheyne, Surgeon General to the Forces.—The first tendency to hæmoptysis experienced by ———, now a clergyman in the established church, appeared when he was about the age of fifteen, in the year 1807. From that period to the year 1823 he continued subject to several attacks of bleeding annually, but of so slight a nature as not to affect his general health, or interfere with his professional avocations.

In the month of May, 1823, however, he experienced an attack so serious, and attended by so alarming symptoms, that, under medical advice, he was bled to the amount of twenty ounces, and took for several successive days, (with a view of lowering the circulation,) frequent doses of a nauseating mixture, which reduced the pulse, and for a time checked the bleeding from the lungs. But the complaint returning, and great debility coming on, he was obliged to absent himself from professional duty, and repaired to the neighbourhood of Dublin.

To the hæmoptysis were now added total loss of appetite and derangement of stomach, so that the food was rejected almost as soon as swallowed. In this state he continued about five months, when being advised to spend the winter on the continent, he left Ireland, October, 1823, and proceeded to Nice, where he arrived early in December.

Previous to his departure from Ireland an issue had been inserted in his arm,

which he was directed to keep open on the journey; his health very much improved, but every morning he expectorated a little blood, or mucus tinged with blood. In a few days after his arrival at Nice he was again attacked with bleeding from the lungs, and extreme difficulty of breathing, so that for several nights he was unable to lie down; but upon changing his residence from the north to the south of the town, the asthmatic affection immediately ceased.

The hæmoptysis also was in some degree checked, but the derangement of stomach and expectoration of bloody mucus still continued. At Rome, where he passed the months of March and April, 1824, and subsequently at Geneva, during the summer, he was subject to frequent returns of the complaint, occasionally so severe as to call for large bleedings from the arm, and other active treatment.

In November he returned to Ireland, having been detained some weeks in Liverpool in consequence of a very serious attack of hæmoptysis. In Dublin, during the winter, the complaint increased in violence, and became much more frequent in its returns; nor did the various remedies usually prescribed in such cases, appear to check it in the slightest degree.

The constant recurrence of those attacks produced great emaciation, and, at length, such a degree of weakness, that he was unable to walk across a room without assistance.

In this state of extreme debility he remained up to February, 1825, when every thing else having failed, it was suggested to try small bleedings from the arm at stated periods. For some months previous to the application of this remedy he had daily at least three, and frequently four attacks of hæmoptysis. About the middle of February, immediately after an attack, six ounces of blood were taken from the arm. For three days after he had no attack, and on the fourth a slight one, after which six ounces of blood were again taken. No attack for ten days. The attacks now gradually became less and less frequent, but every week six ounces of blood were taken from the arm. In the beginning of May he went to the country with directions to continue the stated bleedings, which he did every week, using the lancet himself, and thus being enabled at once to check an attack. The blood was invariably much cupped and buffed; the complaint gradually subsided; health and strength slowly returned. During the whole of the ensuing winter he was able to take exercise in the open air without suffering from cold. In the month of June, 1826, he again entered upon the duties of his profession, from which he has never since been obliged to absent himself, and with the exception of an occasional attack, which occurs generally in the spring and autumn, and is invariably checked by the lancet; he is now in as good health as he has ever been at any period of his life.

As a precautionary measure he continues to take from four to five ounces of blood from the arm every six weeks or two months. The blood does not now exhibit the slightest appearance of inflammation.

During the entire illness, until recourse was had to venesection at stated times, the digestive organs were exceedingly deranged, but with the abatement of the hæmoptysis, the stomach began to recover its tone, and the bowels to act without opening medicine.—*Dublin Hospital Reports, Vol. V.*

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28. *Case of Peritonitis resembling that produced by Perforation of the Intestines, Successfully Treated.* By Drs. Graves and Stokes.—A middle aged man was admitted into the Meath Hospital on the 27th of June, 1830, apparently in the last stage of peritoneal inflammation. The disease was of three day's standing, had supervened suddenly in a few days after hypercatharsis induced by a large dose of Glauber's salt, and followed by long-continued exposure to cold. It was attended by several of the usual symptoms of peritonitis from ulcerative perforation of the intestine. The belly was swollen, and so exquisitely tender, that the slightest pressure made the patient utter screams. The countenance was hippocratic, and the patient tormented with constant hiccup. Coldness of the extremities had commenced, and the pulse was weak

and slow. Before the hour of visit. leeches had been applied to the belly. without relief, the patient was then ordered one grain of opium every hour.

The next day it was found that the symptoms were improved. *The patient had not experienced the slightest coma, head-ache, or delirium.* The same plan of treatment was persevered in, the daily dose of opium being gradually diminished until the 7th of July, when the convalescence having been completely established, the remedy was omitted. During this time diarrhœa set in for three or four days severely; this was treated by the application of a few leeches to the anus, and the use of anodyne enemata.

The patient took in all one hundred and five grains of opium, (exclusive of that in the injections,) without ever experiencing any of the usual effects of this substance when exhibited in large doses!—*Dublin Hospital Reports, Vol. V.*

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29. *Scrofula treated by Compression.*—In one of the late numbers of the *Lancet*, Mr. Dermott proposes to treat scrofulous ulcerations by the application of pressure. From some facts that have fallen under our own observation, and the beneficial effects that are said to have been derived from the employment of this means in the treatment of cancer by Dr. Récamier of Paris, we are inclined to think favourably of the plan. Mr. Dermott's method is first to reduce the cutaneous inflammation by the free employment of leeches to the part, and the use of purgatives, and then to have recourse to Baynton's method of treating ulcers of the legs. The ulcerations are first to be covered by simple dressings, soft compresses placed over these to secure equable pressure, and the whole bound firmly on by means of adhesive straps, taking care in their application to the neck not to pass the straps over the pomum adami, least the respiratory function might be impeded.

OPHTHALMOLOGY.

30. *Cauterization of the Transparent Cornea.*—M. Serres, principal physician to the hospital of Uzès, was the first to observe the influence of cauterization of the cornea upon dilated pupil, and an account of his first trials with the remedy, were inserted in the *Ephemerides Médicalés* de Montpellier for February 1827. Whilst employing as a local application to the eye, an alcoholic extract of nux vomica, for the cure of hemeralopia, in a girl ten years of age, M. S. one day observed near the margin of the right cornea, a small ulcer. To promote the cicatrization of this ulcer, he cauterized it with nitrate of silver; and that same evening the girl was able to see. On examining her eyes the next day, the left eye was found unchanged, but the pupil of the right eye had become contracted, and sensible to the light. Attributing this improvement to the cauterization, M. S. made two superficial eschars on the margin of the cornea of the left eye, the pupil suddenly contracted and that very night the patient could see with this eye. After a month there was a strong disposition to a relapse which was prevented by a new application of the caustic.

The second case in which M. S. tried the cauterization, was in a soldier affected with hemeralopia. The cauterization was here first made on the sclerotica of the right eye near the cornea, but without benefit; it was then tried on the cornea, this was followed the next day by a contraction of the pupil. This success encouraged M. S. to try the effect of the application on the left eye. The pupil instantly contracted and became sensible to light.

The third case was one of dilatation of the cornea, resulting from a fall on the right side of the orbit. The inflammation was relieved by leeches, &c., but vision was much impaired, and two months after the accident, the pupil was irregularly dilated, and the patient's vision was very obscure. A single

cauterization produced a contraction of the pupil, and rendered it very sensible to light.

M. S. was led by his success in these cases to try cauterization of the cornea for the cure of amaurosis, but without success; he however, expressed his conviction that benefit might result in some cases of this disease from its use. This opinion has been in some degree confirmed, by two cases recently communicated by Dr. Serres, of Montpellier, to the Athenæum of Medicine of Paris, and published in the *Revue Médicale*, for August, 1830.

Dr. Serres observes that cauterization of the cornea, in cases of *mydriasis*, has been too much neglected, because it has not always been successful; and that he should scarcely venture now to mention this practice, if he had not witnessed its advantages, and also seen some unfortunate hospital patients who had been abandoned to their misfortune, when they probably might have been restored to sight.

Case I.—Louis Perrin, æt. twenty-five, an artillery soldier, received a blow on the eyeball with a piece of wood. He was knocked down, and immediately deprived of the power of distinguishing objects. The eye became very painful and inflamed: he continued his route, however, and in ten days arrived at Montpellier. The pain had now nearly subsided; but, if he endeavoured to look at any object in a strong light, the eye filled with tears, and his vision was very imperfect. The pupil was so much dilated as nearly to prevent the iris from being visible. He was bled, and a moxa was applied to the right temple, without much benefit. *The cornea was now cauterized in different points of its circumference, and the pupil almost immediately contracted.* Inflammation followed, either from the conjunctiva being touched, or from the too great strength of the caustic; but it was soon relieved by appropriate means. The sloughs produced by the cauterization were gradually detached, and the cornea recovered its transparency. *The pupil, although still contracted, became more and more accessible to the rays of light, and the patient was conscious of an improvement in his sight.* About a month from the first application of the caustic, he saw well enough to read very small print, at a foot and a half distance, and he quitted the hospital.

Remarks.—This case, the first of the kind we had observed, was quite sufficient to attract attention. It was worthy of observation, that the pupil contracted the moment the caustic was applied. Now, if the iris is so sensible to the application of caustic to the cornea, and if it only contracts under the influence of the retina, it must be presumed, that the action of the nitrate of silver extends to the retina. Some good had indeed been done by the moxa, but the cauterization of the cornea augmented the improvement. The success of this treatment may be thus accounted for: the relation between the ciliary ganglion and the cornea offers as available an explanation as that derived from the connexion of the temporal or orbitar nerves with the nervous apparatus of the globe of the eye.

Case II.—M. L***, a medical student, was struck with a stone just between the eyebrow, and opposite the superciliary foramen. He was instantly deprived of the sight of both eyes, and was led home. In a few hours, the pupil of the eye which had been struck was excessively dilated. M. L. suffered much during the night, and in the morning he was bled from the arm. The following day, leeches were applied behind the mastoid processes. Emollient lotions, foot baths, with mustard clysters and laxative ptisans, were used. As these remedies only diminished the inflammation, it was determined to cauterize the cornea, with the view of exciting the sensibility of the iris and retina. The iris contracted, but vision was not restored. From a second use of the caustic, a good deal of inflammation was produced. The sight gradually amended, but the patient, being rather impatient, consulted Prof. Lallemand, who recommended electricity. The pupil very nearly recovered its ordinary dimensions, and there were no traces on the cornea of the cauterization. M. L.

saw enough to read tolerably well even with the injured eye, but he occasionally saw objects double, or in a reversed position.

Remarks.—In this case the cure was incomplete, but still the influence produced by cauterizing the cornea was evident. It may be presumed, perhaps, that electricity was here the active agent in the improvement of sight; but M. DEMOURS, who has often tried it in cases of mydriasis, asserts that the benefit which arises from it is but momentary, and that, when he employed it, the pupil, in a few minutes was as much dilated as before, and the patient no longer able to read. The slowness with which vision was improved in this instance, by showing the severity of the injury, proves the power of the remedy. It is very clear that we had not here to contend with simple and temporary dilatation of the pupil. That the retina must have sustained considerable injury, is proved by the imperfect manner in which its functions are still performed. The inflammation which succeeds the application of the caustic, is not of frequent occurrence, and is usually slight, if care be taken that the cornea alone is touched, and only upon some points of its circumference. In this case, it was necessary that the whole circumference of the cornea should be cauterized, and it was therefore unlikely that the conjunctiva should not be affected by the nitrate of silver.

CASE III.—An old soldier, of the name of Hodge, after much fatigue and exposure to severe weather, was attacked with a sudden dizziness and loss of sight of the right eye. Vision was soon restored, but from this time the eye grew daily weaker. The slightest cause, as sneezing, for example, obscured his sight. The right eye was principally affected; and, towards dusk in the evening, he could with difficulty see his way. The pupil was considerably dilated. Such was the state of the man when he was admitted into the hospital. On the following day, without any previous treatment, the cornea was cauterized. slight inflammation followed. *The pupil contracted naturally*, and, in proportion as the sensibility of the eye diminished, he could distinguish objects more clearly, and at a greater distance. As this man now left the hospital contrary to the wish of the surgeons, the further progress of his case cannot be reported.

Remarks.—This case affords an additional proof of the influence of caustic upon the iris, when applied to the cornea. It is necessary to observe, that the cornea easily recovers its transparency where it has been cauterized. In none of the above cases did there remain the slightest trace of the application of the nitrate of silver. This, indeed, is not astonishing, when we remember that this caustic will remove spots from the cornea. We lately saw a patient at Paris, whom several surgeons of the city had abandoned, the transparency of whose cornea was nearly restored by frequent cauterizations, which were directed by Professor Lallemand.

With respect to the nature of the cases we have detailed, it is evident that the third was one of hemeralopia; but the first and second must be considered as instances of amaurosis, produced by contusion of the globe of the eye.

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31. *Case of Fungus of the globe of the Eye successfully extirpated.* By W. TWINING, Esq.—A healthy, but rather slight made Hindoo, about 50 years of age, applied at the Eye Infirmary on the 17th February, 1826, having a fungus that protruded from between the right eyelids, larger than an egg: it was of a red colour, hard, and its surface irregular or granular, like a firm cauliflower, and when handled or pressed, there was little bleeding, but always a puriform discharge.

The tumour appeared to grow from the whole of the eyeball: it was moveable, and its base was firmly girt by the eyelids, but not attached to them: in fact there was no very strong attachment apparent, except at the lachrymal gland It filled the whole front of the orbit, and protruding as above stated, was not only a hideous deformity, but was productive of severe pain in the

orbit and head. The weight and pressure of the protruded portion of the tumour which rested on the cheek, had there caused ulceration of the skin. The disease had been 14 months in arriving at this state, and was preceded by inflammation, which the man said arose from a particle of straw blown into his eye by the wind.

On the 5th of March, I extirpated the disease with a common scalpel. The base of the tumour was so firmly girt by the aperture of the eyelids, that an incision was first requisite from the outer corner of the eye towards the temple, so as to give more room for the operation, which was then accomplished in less than a minute by a few strokes of the knife. Two arteries bled freely, and were secured by ligatures. A piece of lint was placed over the closed lids, and over that a sponge retained by a bandage.

There was no unfavourable symptom afterwards, and the patient was discharged cured at the end of the month. This man presented himself at the Eye Infirmary a few days ago, (February, 1827,) remaining quite well; and there does not appear any tendency to a return of the disease.

After the operation, on making an incision across the tumour, it was found of a firm granular texture throughout; and in its centre the remains of the eye were very evident. The whole globe of the eye, with a portion of the optic nerve, were removed.—*Trans. Med. and Phys. Society of Calcutta, Vol. III.*

32. *Absorption of the Iris.*—Mr. Middlemore, assistant surgeon to the Birmingham Eye Infirmary, states that he has several times known laceration of the iris from local injury, followed by its partial, and in one instance, its total absorption, and in every case that the organ so injured, has eventually, become amaurotic.

A boy, he says, received a blow upon the eye, from a piece of metal, which was followed by considerable pain and inflammation, and laceration of the iris; for a time, the pupil was cordiform, being pointed at its lower part; slowly and without any pain the whole of the iris was absorbed, and the eye became amaurotic.—*The Midland Medical and Surgical Reporter, Feb.* 1831.

33. *Congenital Malformation of the Cornea and Sclerotica.*—The following case is related by Mr. Middlemore, in the *Midland Medical and Surgical Reporter* for February last.

A servant of a chemist of this town, 22 years old, has a small excrescence on the left eye, arising from the cornea and sclerotica at its temporal side: it has a white, smooth, and convex surface, and in its centre there is a small depression, from which several strong black hairs arise, which incline downwards, so as to hang over the lower lid; it is firm to the touch, and densely opake, and appears to be covered by the sclerotic conjunctiva; the surrounding cornea and sclerotica preserve their natural structure; he says that the blemish was born with him, and that the hairs began to plague him only a few years ago. This man usually calls upon me for the purpose of having the hairs removed, about every six weeks; and it is my intention to apply the nitrate of silver to the cavities containing the bulbs of the largest hairs, when I next extract them, and if this does not succeed, to dissect them out, if it can be accomplished without any danger of penetrating the globe.

In this case, the tumour had an equal origin from the cornea and sclerotica; it was extremely firm to the touch; it had increased with the growth of other parts; the hairs did not appear to produce inconvenience until the period of puberty, and they were of the same colour, and had the same inclination, as those of the lower eye-lid. As this is the only instance I have met with of a congenital malformation of this description, it is impossible for me to say how far the circumstances just enumerated are uniform in their occurrence.

34. *New operation for the cure of Ptosis.*—R. T. Hunt, Esq., assistant surgeon to the Manchester Institution for curing diseases of the eye, has proposed

in cases of ptosis, occasioned by the loss of power in the levator, whether attributable to the actual destruction of a part of the muscle, or to paralysis of the nerves supplying it, caused by injury or disease, an ingenious mode of treatment, by which the action of the occipito-frontalis is substituted for that of the levator. In the action of raising the eye the levator palpebræ is not the only muscle brought into play. The anterior portion of the occipito-frontalis also considerably contributes to this effect, by elevating the superciliary teguments into which it is inserted. These muscles, says Mr. H., act so much in concert, that it is almost impossible to draw the eyebrow upwards, whilst the eye remains perfectly shut, and equally difficult to depress the eyebrow, whilst the eye remains wide open. And when we reflect that the origin of the levator is situated at the very extremity of the orbit, and that it is inserted into the tarsus, a part so easily moved, it becomes evident that, unless this muscle's action were restrained by some other power, the tarsal margin would be drawn two far into the orbit. The anterior fibres of the occipito-frontalis which are so inserted into the superciliary integument, as when in action, to stretch the upper part of the skin of the eyelid, constitute this power; and it is with reference to this combination of muscular actions, that the following method of operating is recommended.

The operation is performed by dissecting off a fold of integument; the difference from the usual way of proceeding, consists in the portion removed. The upper incision is made immediately below the line of hairs forming the eyebrow, and extends each way, to a point, opposite the commissures of the eyelids. In making the lower incision no precise direction can be given. It should approach within a short distance of the tarsal margin, varying in the extent of the portion included between the two incisions, according to the greater or less degree of relaxation of the skin, which is different in any two individuals, and it should meet the upper incision at both extremities. When the intervening portion has been detached, the divided edges should be accurately united by, at least, three sutures, and the wound dressed in the usual manner.

The effect produced, when adhesion is perfected, is the attachment of the eyelid to that portion of the skin of the eyebrow, upon which the occipito-frontalis acts, and by means of this attachment, substituting the action of this muscle in raising the eyelid, for that of the levator, which is no longer capable of doing so.

Mr. H. states, that the removal of so large a portion of skin does not produce, contrary to what might be supposed, any deformity.

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35. *The Eye Institution of Manchester.*—This was instituted in 1815, and has had to struggle with many financial difficulties. Its medical establishment consists at present, of a consulting physician, two surgeons, and two assistant surgeons. It has a small house in which four or five beds are provided for the reception of cases requiring the more serious operations. The number of cases annually treated here has *exceeded one thousand;* and the expenditure has rarely been more than £400!—*North of England Med. and Surg. Journal, Nov.* 1830.

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36. *Amaurosis caused by the Spontaneous Suppression of Scald Head, successfully treated.*—Dr. Weber of Bouxviller relates the following case. A girl of 13 years of age, previously in good health, was attacked with amaurosis apparently in consequence of the spontaneous suppression of tinea capitis. Mr. W. had leeches immediately applied behind the ears, followed by an emetico-cathartic potion, a blister to the back of the neck, and a decoction of the flowers of the arnica, and the root of valerian; (two drachms of the former to six of the latter; half a pint of water, and half an ounce of loaf sugar; a spoonful every three hours,) and finally an issue in the arm. The sight was entirely reëstablished.—*Gazette Médicale de Paris, March 26th,* 1831.

SURGERY.

57. *Case of Fungus Hæmatodes of the Thigh, cured by Amputation.*—The following case related by William M'Dowall, Esq., in the *Glasgow Medical Journal*, for February last, is interesting, from the success which seems to have attended the operation, certainly under very unpromising circumstances. There are not many cases on record in which any operation has permanently arrested this disease.

The subject of the following case was a lad twenty-three years of age, who had been about nine years previously, seized with a swelling and inflammation a little above the right knee joint, upon the inside of the thigh, accompanied with fever and swelling all over the thigh, and an abscess formed, which was said to have broken of itself, and to have discharged a great quantity of matter from three different openings above the knee. It continued to discharge matter occasionally till about the end of September, 1829, when Mr. M'D. was called to see him. The thigh was then swelled from the knee to near the groin. The tumour was found soft, and had the appearance of fluctuation but not very distinct, like a deep-seated abscess. Mr. M'D. two days afterwards opened the tumour, with an abscess lancet, but no matter came out; thinking that he was not deep enough to reach the matter, he opened it more deeply with a scalpel, but nothing appeared except a white fatty substance and a little discharge of blood from the cut. From that opening of the integuments, a large fungous white tumour began next day to advance, and every day it gradually shot out larger and larger. Mr. M'D. enlarged the opening of the integuments of the thigh to see what size the tumour would grow to. It continued to enlarge till it measured about twenty inches the one way over the top, and nineteen inches the other way, and the circumference at the base measured about twenty-five inches. It had much the appearance of a large melon, and blood began to ooze from it, as if pressed from a sponge. There was no way of stopping the bleeding but by fine tow or lint applied dry over the surface; upon the top it began to mortify, and emitted a very fœtid smell. The lad was anxious to have this tumour removed. For this purpose he was taken out of bed and placed upon a table, and when the tumour was cut into, its substance appeared to be soft and pulpy like brain. It was removed down to the bone of the thigh, and was found to penetrate under the integuments and betwixt the muscles; Mr. M'D. was obliged in a great measure to push it out with his fingers, for, on account of its softness, it would not separate well from the muscles by cutting.

"There was a great loss of blood in the removing of the tumour," says Mr. M'D. "which took much longer time than I had anticipated. The lad was nearly an hour under the operation; and from these causes, when the wound was dressed he fainted away, and I was much alarmed for his recovery from the faint; but by cordials and applying heat to his feet he gradually recovered. The sac and wound seemed to get clean, and began to fill up with new granulations. The matter got better; his appetite and strength seemed to recruit for about two or three weeks; and we were hopeful that the wound would have healed. but the favourable appearances did not continue long. Five fungous tumours began to advance out of the sac of the wound. Every day they enlarged, and they at length assumed heads as big as the largest apples, and indeed appeared very like a cluster of apples upon a tree. When this second fungous growth was advancing, a sharp point of bone was felt by the finger just over the head of fibula. It had separated from the inside of the thigh bone, and had passed into the situation just mentioned, where it was cut out with difficulty. As soon as it was removed, a large fungous tumour just of the same appearance with the others began to advance. That fungous bled profusely; and when the lad moved his limbs, or upon the tumours being dressed, I observed the blood oozing out of the top of them all, like water pressed from a sponge. He went on in this way for several weeks; and from pain and loss of blood he was reduced

to the last state of human distress and misery. His pulse was upwards of 125, his face pale, and his appetite nearly lost, and he was affected with diarrhœa. It was now about ten weeks from the time I had first seen him, and it was suggested that the only chance he could have of recovery was by the amputation of the limb. To this, although he had previously objected, he now readily submitted; and on the 10th December, 1829, after consulting with James Watson, Esq. surgeon in Gatehouse, I performed the operation by amputating the limb above the diseased part. The lad stood it well, and there was not above half a cupful of blood lost in the operation. The place where the patient lay was a poor cottage, which being very badly lighted, and the day being dark, we were obliged to use candles in taking up the vessels—this caused the operation to occupy a few minutes longer. It is unnecessary to relate the different steps of the operation, but the limb was taken off very high up, about four inches below the trochanter major. The pulse came down, and the general health improved every day after the limb was taken off, and in about a month the stump was quite healed, and the poor lad had quite recovered his strength. I may mention, that I met him on the road upon the 10th day of April, 1830.

"After the limb was removed, it was dissected and examined, when it was found that the piece of bone measuring five inches in length, which was cut out near the head of the fibula, had been detached from the femur; and had left the cavity of that bone open to the marrow. From this opening the fungous hæmatodes had proceeded. The whole of the muscles near the knee joint were turned into cellular substance and had lost their action, and there was very little motion of the joint. The cavity of the joint seemed to be sound, but the thigh bone above the knee on the inside where the piece of bone had exfoliated was in a carious state a long way up."

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38. *Idiopathic Glossitis.*—In our first vol. pp. 213, 219, 448, and in vol. four, p. 533, will be found accounts of four cases of glossitis; the following cases, related in the *Glasgow Medical Journal*, for February last, by John Orgill, Esq., are interesting, as contributions to the the history of this rare affection.

Case 1.—C. Kenmuire, a farmer, aged 50, complained of much difficulty in deglutition, which he attributed to inflammation of the throat. As he lived at some distance in the country, and could not come in himself, his wife came to me, and explained the symptoms as well as she could. Appropriate remedies for the supposed disease—inflammation of the throat, were recommended. About a week after this, he was brought to town in a cart. I then found that the left half of the tongue was so much swollen, as completely to prevent articulation and deglutition. The right half, of its natural size and appearance, was in part overlapped by the diseased half. For eight days preceding, he had not been able to swallow any thing solid; and during the last two days, he could not get down a drop of liquids. The pulse was nearly natural. I wished to apply leeches to the tongue; but the mouth was so completely filled with it, as not to afford space for them except at the tip. I therefore put eleven large leeches to the root of the tongue externally; and, when they fell off, applied a cupping glass over the bites, by which means, about six ounces of blood were obtained. But this afforded little relief. I then introduced a scalpel flat on the dorsum of the tongue; and made two incisions about half an inch deep, from the furthest point to which the instrument reached to the tip.

The incisions bleed pretty freely; and the swelling was, in consequence, so far reduced as to enable him to answer questions intelligibly. He could also expectorate a little, which he was before unable to do, though, as he expressed it, "choking with his spittle," which was thick and very tenacious.

This was at noon. I saw him again about eight o'clock in the evening. The diseased half of the organ was then as much swollen as ever. I scarified it still more deeply; and ordered an enema with an ounce of castor oil. As he was evidently exhausted from want of food, for which he had a good appetite, but which, as I have stated; he had been unable to take for eight days, I or-

-dered some soup to be made, with the intention of calling in an hour after, and of attempting to introduce it into the stomach by means of the stomach-pump. I accordingly returned, and found him smoking his pipe, the last scarification, along with the enema, having given him great relief. With considerable difficulty, and very slowly, he swallowed a small bowl of soup. When I saw him next morning, the tongue had resumed its former swollen state. I then observed, what I had not done before, a peculiar lividity at the tip of the diseased half of the organ. I now introduced the scalpel as before, and made an incision more than an inch in depth. A great gush of most offensive pus followed, and gave the patient immediate relief. The incisions healed in eight days; the tongue having recovered its proper size and appearance. The sensibility on the left side of the tongue continued impaired for a year after, but it was afterwards gradually recovered.

Case 2.—March 5th, 1828. James Brown, a sailor, æt. 35, after languor, and some rigour, complained of difficulty of deglutition, which he attributed to inflammation of throat. I saw him next day, and found the left half of tongue swollen to at least three times its natural bulk, and very painful. Articulation and deglutition were performed with much difficulty and pain. The surface of the tongue was foul, except at the tip, which was peculiarly clean and red. The papillæ of this part seemed to have entirely disappeared, leaving the tip remarkably smooth. The median line formed an abrupt termination of the enlargement. Pulse 100, very hard and full. Some thirst. The abstraction of twenty ounces of blood gave some relief, and enabled him to swallow a brisk cathartic immediately after. The next day the tumefaction and pain seemed to be again on the increase. Five large leeches were applied to the tongue; and the cathartic was repeated. The leeching gave immediate relief: and, from this time, the disease rapidly abated, leaving the organ in a healthy state on the fourth day after the attack.

Case 3.—July, 1828. J. B., a woman from the country, applied to me with glossitis affecting the whole organ, and terminating in suppuration of the right half. She was relieved by scarifications, by letting out the pus, by the lancet introduced at the side of the tongue, and by cathartics. Some months after, she was again attacked with the same complaint. As I was hurriedly called away when she came to me she went to another surgeon, and I never learned the result. In this case, likewise, there was a peculiar lividity, and smoothness at the tip, on the side which suppurated.

Remarks.—In none of these cases could the patient assign an adequate cause for the complaint, unless we consider as such, the only one that Kenmuire could give. At the first bite of a very sour apple, which he had been eating two days before the attack, he felt as if a needle had run into his tongue; and a sudden flow of saliva followed. In the 4th vol. of the Dublin Hospital Reports, a case of idiopathic glossitis affecting the left half of the tongue is related by Dr. Graves, and is, apparently, the only case on record in which inflammation was limited to the half of the organ. In the first two cases related above, the disease was confined to the left half also. This, of course, must be considered as an accidental coïncidence; for we can hardly conceive why the left half should be more liable to inflammation than the right. Perhaps the lividity on the tip in the first and last cases may be considered as symptomatic of the suppuration which took place. If so, this would encourage us, in a similar case, to have recourse to incision as practised in these cases with so much success. I believe it will be found very difficult to detect the presence of pus by the feeling of fluctuation which generally guides us in other cases. The tongue fills the mouth so completely, and the introduction of the fingers gives so much pain, that putting out of the question the unsteadiness of the organ, its peculiar texture, and the deep seat of the pus, it may be considered a matter of some importance to fix on some appearance as indicative of the formation of an abscess. So far as these cases go, the livid colour of the tip of the tongue may be considered as symptomatic of suppuration.

39. *On Permanent Involuntary Contraction of the Muscles.* By SAMUEL SMITH, Esq., of Leeds.—It is not uncommon in surgical practice to meet with cases, where certain muscles have remained for a great length of time rigidly and permanently contracted. This state sometimes results from disease in the nerve distributed to the affected muscles; occasionally it is produced by the muscles having their points of attachment unduly and unnaturally approximated for a considerable length of time—as in unreduced dislocations—in the treatment of fracture, &c.; and, in some cases, the precise cause cannot be ascertained.

When a muscle has long been in this state, it often remains contracted, solely from habit, even after the cause which originally produced it has ceased to operate; and by breaking this habit, relief may generally in a short time be obtained.

There are certain sets of muscles which act as antagonists to each other, as for example the flexors and extensors of the arm. The contraction of either of these sets of muscles is always accompanied with a simultaneous relaxation of the other. Thus, if the arm be powerfully flexed by the biceps, and the extensors brought into action, the extensors no sooner act than the biceps become relaxed.

Suppose then the flexors of the arm to have been some time in a state of permanent involuntary contraction; if the limb, by gentle force be put in the position of perfect extension, the flexors become relaxed, and by maintaining this position a certain length of time, this unnatural *habit of involuntary contraction* which has been acquired in the flexors, may be broken or destroyed. To prove the success which may be expected to follow this plan of treatment, the following cases are selected from many others which have come under my notice.

Mary Leak, aged 25, a stout, robust woman from the country, was admitted a patient of the Infirmary under my care, July 30, 1820. She had been fifteen months under treatment, suffering much during the whole of this time from permanent contraction of the quadriceps extensor femoris, the whole of which muscle was in an extremely rigid state. She walked without pain, but an inability to bend the right knee in the least degree gave her the appearance of having a wooden leg. The warm-bath, frictions, and many other means had been persevered in for a great length of time, without producing the least effect upon her complaint. On the day succeeding her admission, I placed her on the bed on her left side, and taking hold of the ankle with my right hand, grasping the thigh with my left, I succeeded in drawing the heel and pressing it against the buttock, thus producing a perfect flexion of the limb. It is necessary to explain that in accomplishing this, recourse was had more to art and cunning, than to force. It was gratifying to find that the rigid muscles had become perfectly relaxed, and in order to destroy the tendency to reäction, two leather straps with buckles were placed tight round the upper part of the thigh and ankle, binding the limb in this position, the heel touching the buttock.

She was ordered to remain in bed bound in this manner until my visit on the following day. The relief was immediate and complete. Upon being released next day, it was found that the muscles which had been for so long a period contracted, were quite relaxed; and not only so, but the tendency to involuntary contraction was destroyed. Suspecting, however, it might return, she remained an in-patient ten days: no return of the complaint took place; she was made an out-patient, and appeared as such August 30. She was perfectly well, and had suffered no relapse.

October 20, 1826. William Holdin, aged 36, admitted a patient of the Infirmary, under my care, on account of the right masseter muscle being permanently contracted. He has been fourteen months incapable of opening his mouth more than to admit the handle of a leaden spoon. Upon introducing the finger within the cheek, and the thumb without, the muscle can be grasp-

ed, and in hardness it resembles bone rather than muscle. He has been upwards of a year unable to close the right eye. He was directed to wear a wooden wedge between the teeth so as gradually to open the mouth, and thus gain upon the contracted muscle. No medical treatment was adopted, and in the course of a week or ten days the mouth could be opened upwards of an inch; the masseter muscle had become relaxed and soft, and he was so much relieved that at his own particular wish he went out, November 10th, in order that he might labour for his family; he was, however, directed to continue the use of the wooden wedge for some time. He was able to take common diet, which had materially improved his strength, having previously lived a long time upon spoon-meat, from his inability to open the mouth: he could also close the eye, which he had not done before for upwards of a year.

November 2d, 1829. Miss H. a young lady, residing about twenty miles from Leeds, had the misfortune, nine weeks ago, to fall and sprain her wrist, for the relief of which leeches and the usual applications were had recourse to, under the direction of a very respectable practitioner; in a few days she was better of the sprain, but the ring and little finger were permanently contracted, and she had lost the power of extending them· to relieve this affection various means were had recourse to without effect: she then came to Leeds to place herself under my care. Finding she had considerable pain upon pressure, in the course of the ulnar nerve, I thought it adviseable previous to extending the fingers, to apply a small blister, (three inches long and one broad,) above the wrist, and in the direction of the nerve. The day following, the fingers were gently extended; dressings applied to the blister, a compress of lint, and a splint reaching from the extremity of the fingers a little beyond the wrist, was firmly secured by a bandage to keep them extended.

Next day they were removed, the contraction of the flexors had ceased, she had the perfect use of her hand, and has suffered no relapse up to the present time, (June, 1830.)—*North of England Med. and Surg. Journal, for Nov.* 1830.

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40. *Lithotrity in Asia.*—Dr. Civiale communicated to the Academy of Sciences of Paris, a letter addressed to the Minister of Foreign Affairs, by the French Agent in Bagdad, announcing the performance in the latter city of the operation of lithotrity on twelve persons, by a German surgeon named Martin, and all of whom were perfectly cured, except a child who was obliged to be cut in consequence of the great size of the stone.—*Gaz. Médicale, Feb. 12th,* 1831.

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41. *On the Cure of Strangulated Hernia by the Taxis.*—In a communication in the *Glasgow Medical Journal,* for November, 1830, George M'Leod recommends for the cure of strangulated hernia, a longer perseverance in the taxis, and that greater force should be employed than has hitherto been thought safe by surgeons. In 1803, he states that he was requested to visit a shoemaker, who was labouring under strangulated inguinal hernia. The tumour occupied the scrotum to its very fundus, and had been irreducible for several hours. Mr. M'L. determined on giving the taxis a very full trial, actuated in this, partly from having witnessed the most insignificant fingering called by that name, and partly from analogical reasoning. Cold applications were used for a short time, after which he proceeded to compress the tumour with both hands, and continued to do so, keeping up a steady pressure, with little or no remission, for nearly half an hour; at length a gurgling noise was perceived under the hands, and the protruded parts slipped into the abdomen. His patient suffered no inconvenience afterwards, and was next day at his work.

"This case," says Mr. M'L. "made on me a lasting impression. The force used was very great, as well as the length of time during which it was applied. The sufferings of the patient while under the operation were inconsiderable, and immediately after it they were all gone. Following up this most important fact, I have ever since pursued a similar mode of treatment, and my success has been

more than equal to my most sanguine expectations. During these last 22 years, twenty cases have fallen into my hands, and complete success has crowned my efforts in all of them, with the exception of one case, where the intestine adhered to the sac, and where the complete return of the protruded parts was impossible.

"The method pursued by me is very simple. The patient is placed on his back, his knees elevated so as to relax the muscles as much as possible. the tumour is grasped at its greatest diameter by the right hand, whilst with the left the neck of the tumour is firmly supported and compressed. This last part of the operation, performed by the left hand, I deem of the utmost importance; it prevents the tumour from spreading out in a lateral direction, and consequently prevents it from doubling up over the external ring. The compression then is to be kept up by the right hand in a steady and gradually increasing manner, and not performed by jerks. If the strangulation have existed for several hours, the operation will seldom succeed in a shorter space of time than fifteen minutes, and in large herniæ a much longer space is often required; I have in such cases continued the compression from *one to two hours.* The difficulty of replacing the parts when the tumour is very large, appears to arise from the difficulty of grasping the tumour, and consequently the additional assistance of one or both hands of another person becomes necessary."

Mr. M'Leod does not believe that there exists any thing entitled to the name of *stricture* in strangulated hernia, but that the cause alone why the protruded parts cannot be replaced, is the extreme distention by their contents, wind, &c. in the first instance, and enlargement in the second by fulness of vessels.

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42. *On the Acupuncturation of Arteries in the Treatment of Aneurism.*—M. Velpeau communicated to the Academy of Medicine of Paris, at the meeting of the 28th of December last, an exceedingly interesting memoir on this subject. We find notices of this memoir in several of the French journals, but the fullest and most satisfactory we have met with is the following from the *London Medical Gazette.*

The greater number of important discoveries in the arts and sciences have been owing rather to chance than inference, or at least it is in conducting investigations for some other purpose, that discoverers have arrived at the ends they have attained.

In April, 1822, M. Velpeau wished to repeat before his pupils some experiments on acupuncturation, which he had seen performed at Tours, by M. Bretonneau, in 1818:—A dog of middle stature was brought to the amphitheatre with the intention of passing long needles through the heart, the large arteries, and principal viscera: one of these was left in the thigh for twenty-four hours, the artery being transfixed. The animal escaped, and the experimentalist supposed that he would necessarily perish; but two of the pupils, who had found the dog, brought him back four days after perfectly well. The needle which had been placed there being no longer to be found in the limb, M. Velpeau laid bare the artery to ascertain whether the artery had really been transfixed; and if the puncture had left any trace. As the vessel was partially torn, M. Velpeau first inquired why there had been no hæmorrhage; he soon saw that a very firm concretion of fibrine filled it up entirely for the space of an inch. Nevertheless, he drew no inference from the fact, and he had entirely lost sight of it, when, in the month of November, 1828, an accidental circumstance recalled it to his recollection. Whilst he was separating the femoral artery from the vein in a dog, and just as he was pushing it aside with a pin, some one came in, so that he was obliged for the moment to discontinue the operation. A sudden movement of the animal forced the pin through the artery into the limb. It remained there five days, when, on taking it out, and examining the parts carefully, M. Velpeau ascertained that an obliteration of the vessel had been the result in this case as in the preceding. The fact now arrested his attention, and on reflexion he thought he could explain it thus: if it be true, thought he, that

it is sufficient to keep a ligature for an hour or two on large vessels in order to produce their obliteration, as Messrs. Travers, Hutchison, and others assert. it ought likewise to be possible to arrive at the same end by exciting at a given point of these vessels a morbid action capable of impeding the progress of the blood, and leading to its coagulation.

Always impressed with the idea that the contractions of the heart have less influence on the motion of the blood than is generally imagined, M. Velpeau was led to understand how a foreign body, even although very small, placed so as to remain transversely across a vessel, or even so as to make some projection in relief in its interior, is capable of producing the same effect as a ligature. Confirmed in these ideas by the instances of spontaneous obliteration of the large arteries quoted by authors, M. Velpeau commenced some experiments for the purpose of determining the point.

An acupuncture needle, an inch and a half in length, was introduced in the course of the artery in the thigh of a dog without previous dissection; two other needles were also placed on the opposite side. On examining these parts on the fourth day, he found the first needle on the exterior third of the artery, which, however, was not shut up more than one-half: of the other two, one was altogether without the vessel, which was obliterated by a solid clot about the length of an inch, in the midst of which the second needle was situated.

These experiments, continued M. Velpeau, were renewed in the following November, and then again in February, 1830; they were repeated in the course of last April by M. Nivert, at that time the assistant in my course of operations. I also submitted them to new proofs very recently in La Pitié, on a dog, in which I likewise transfixed the aorta with two pins, but which died at the end of twenty-four hours of peritonitis, and the result has always been the same. To be more sure of not missing the artery, I always took the precaution, in the later trials, of exposing it. Sometimes I only used one needle, sometimes I employed two or three, according as the vessel on which I operated was of greater or less magnitude. Every time that the needle maintained its place for at least three days, a solid clot was found at the site of the puncture, and the obliteration of the canal of the vessel was the consequence. The aorta, however, when thus treated, did not undergo any change, but as the needles did not remain there more than something above twenty hours, I do not regard it as just to draw any conclusions therefrom.

It is proper to add, besides, that up to the present time, my experiments have all been made on dogs of small stature, and that the femoral artery is the largest vessel I have transfixed. It is enough to say, that before drawing conclusions, or applying these principles to the human subject, it would be necessary to renew the experiments, and to try them on larger animals—as horses, for example. A single pin or needle has appeared to be sufficient for a vessel not exceeding in size a writing quill; two or three would be necessary for vessels half as large again; and there would be nothing to prevent the application of four or five for the larger arteries. When several are inserted, it is necessary to place them at four or six lines from one another, and in a zigzag form rather than straight.

M. Velpeau next proceeded to speak of the cases in which this method might be advantageously applied. If, as however the author scarcely ventures to hope, the coagulation produced by the presence of the needle should effect a consolidation in the human subject sufficiently strong to render the vessel permanently impermeable, the results would be of immense importance. In place of incurring the risk of wounding nerves and veins, and making a considerable and minute dissection, it would only be requisite to expose one surface of the artery at the smallest possible point: nay, perhaps it might be possible to cure the most formidable aneurisms, as those of the ham or thigh, without dividing the skin, by merely transfixing the artery with a fine needle at the groin. It is suggested as possible, that even aneurisms of the external iliac, or of the aorta, might thus be cured. By fixing a thread in the needle, it might be taken out at any time when this was deemed necessary.

Arteries have been transfixed by different surgeons by means of needles, but principally with a view of giving imaginary security to ligatures; we are not aware, however, of this proceeding having been previously adopted on the same principle as that now advocated by M. Velpeau.

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43. *Tracheotomy.*—The expediency of opening the trachea in those instances in which a foreign body is lodged in one of the bronchial tubes, does not appear to be as yet entirely decided by surgeons. To aid in settling this interesting question, we have been careful to lay before our readers from time to time, such cases as appeared to throw any light upon the subject. An interesting memoir has been recently read to the the Dublin Chirurgical Society, by JOHN BROWN, M. D. and which consisting principally of an analysis of cases does not admit of condensation within the limits to which we are here restricted, and we must therefore content ourselves with the conclusions he has drawn from them, and which appear to us to be legitimate inferences.

"1. That the existence of foreign bodies in one or other *bronchus* can be ascertained by the use of the stethoscope; by the seat of the pain and other uneasy sensations; and by the previous history of the case.

"2. That since the effect of such bodies in these unnatural situations, is to excite inflammation and abscess, most commonly ending, sooner or later, in death, it is incumbent on us to attempt their extraction with the least possible delay.

"3. That small round bodies move freely from the *bronchi* to the trachea, particularly when an opening has been made in the latter, and that the best mode of promoting their expulsion is by such an operation.

"4. That when sharp and angular substances have descended into either *bronchus*, they generally become fixed there, but may be extracted by forceps or other suitable instruments passed through an artificial opening in the trachea.

"5. That the sooner such an operation is undertaken, the greater will be the chances of success, as the presence of the extraneous substance must give rise to congestion and inflammation in the lungs, and to various cerebral affections, all depending on mechanical interruption to the natural course of the circulation.

"6. That although occasional recoveries have ensued subsequent to the spontaneous ejection of foreign bodies from the *bronchi*, such cases are rare; and the greater number of persons so circumstanced have died at longer or shorter intervals."

The following case is also in point.

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44. *Case of Pulmonary Abscess caused by the lodgment of a Chicken Bone in one of the Bronchiæ.* By PETER GILROY, M. D.—A widow lady, æt. 40, of a robust habit and previously remarkable for strength of constitution, was seized, while eating her dinner, on the 8th of August, 1826, with a sudden and violent fit of coughing, threatening suffocation. On recovering, she told some friends who dined with her, and who were greatly alarmed for her safety, "that a chicken bone had gone wrong, and still was sticking in her chest." By this time, however, she breathed freely, and her alarm gradually went off.

The next day she felt her chest oppressed, and complained of a slight tickling cough, with inward soreness at the top of the sternum, and general uneasiness.

She sent for an intelligent apothecary, who, conceiving her illness to have arisen from exposure to cold, took some blood from the arm, and directed aperient medicine, by which treatment she was so much relieved, as to be able to go, in a day or two afterwards, some miles into the country; but the cough and other disagreeable sensations continued, though in a less degree than before. These symptoms had increased at the end of a fortnight, but were again mitigated by a second venesection, and by a repetition of the aperients.

On the 13th of September, about five weeks after the accident, I saw her for the first time, in consequence of a further increase of the symptoms. I found her in bed, with her shoulders particularly low; her countenance was anxious, with great despondency; pulse 96, full; tongue loaded and yellow;

some appetite. She attributed her illness to the same cause as before, and referred the seat of pain to the top of the sternum, towards the right side, where she felt confident the bone still remained.

I was struck with the manner in which she lay in bed, and inquired the cause. She told me "that, as long as she remained perfectly quiet, with her shoulders depressed, she was free from cough; but as soon as she raised herself in the least, or turned on either side, a violent fit of coughing came on, which she could excite when she pleased, by placing herself in the first-mentioned position."

The truth of her assertion was soon verified, as she had occasion to elevate the body considerably: and the fit which immediately ensued, was more violent and more convulsive, if I may use the expression, than any paroxysm of spasmodic asthma I had ever seen. On such occasions she usually experienced a difficulty of expectoration, as if from some mechanical obstacle, and an intolerable fetor from the throat was perceptible, not only to herself, but also to those about her.

From the above facts, I had no doubt that the bone had fallen into the trachea; but as suppuration had taken place in the lungs, accompanied by hectic fever, little could be expected from the resources of art.

She lingered until the 29th of October, and then died, exhausted by pain, irritation, and discharge. From the period of my first visit, she could scarcely move in any direction without the occurrence of a most violent cough, apparently about to end, every moment, in suffocation.

On examining the thorax, twenty-four hours after her decease, a large abscess was found in the centre of the right lung, the greater part of which was occupied by it. The cavity of the abscess contained about twenty ounces of pus, of a reddish-brown colour, and very fetid odour. The piece of chicken bone, (very light and porous, and weighing only six grains,) lay in the superior part of the right *bronchus*, close to the bifurcation of the trachea: this tube here communicated with the upper part of the abscess.—*Edinburgh Medical and Surgical Journal, April,* 1831.

Broussais relates in his Chronic Phlegmasiæ, case 53, an interesting example analogous to the preceding. (See Vol. I. p. 335, American translation.)

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45. *Wounds of the Throat.*—Baron Larrey, in his *Clinique Chirurgicale*, relates some interesting cases of this description: we give the following abstract of them from our esteemed cotemporary, the *Medico-Chirurgical Review.*

Case I.—M. Arighi, (now Duke of Padua, and then aid-de-camp to General Berthier,) received a musket ball in his neck, at the siege of Acre, by which the external carotid artery was cut across, near to the place where it is given off from the internal, and as it enters the parotid gland. The gush of blood from both apertures of the wound attracted the attention of the artillerymen, and one of them instantly pushed a finger into each opening, and thus arrested the flow of blood. Baron Larrey was immediately called amidst a shower of shot and shells. He applied pressure and maintained it carefully for some days, by which means, and without any ligature, life was preserved, and all hæmorrhage prevented.

Case II.—After the battle of Waterloo, the baron had an opportunity of seeing a young English soldier who had had the left external carotid artery *partially* opened. The hæmorrhage was alarming; but the English surgeon cut down on the aperture, and tied the artery both below and above the wound. The patient entirely recovered.

Case III.—Henry Cabon, of the Swiss Guard, was brought into the Hôpital de la Garde, on the 21st of November, 1828, immediately after receiving a sabre-wound, while fighting a duel, in the upper part and right side of the neck. When the baron arrived, the man was nearly dead from hæmorrhage and suffocation. The wound was laid bare, while an assistant made pressure on the line of the artery, and then the baron enlarged the orifice, and disco-

vered that the superior thyroid artery was wounded, as also the external carotid itself. A cellular pouch had formed behind the thyroid gland, (which was goitrous,) filled with clotted blood, and which was pressing on the trachea. The removal of these clots was followed by a jet of arterial blood. The baron was unable to seize the vessels from which the blood issued, and therefore laid bare the trunk of the common carotid, and passed a ligature round it. He was not a little surprized to find this artery no larger than the radial artery at the wrist. This was attributable to the great loss of blood. The great source of hæmorrhage was thus cut off; but some vessel still continued to supply blood at the upper part of the wound. This vessel was fortunately seized by the forceps and secured. The wound was then cleaned and dressed, the breathing continued difficult, and the lips deadly pale. For two or three days it was doubtful whether this man would rally, but eventually he recovered.

Case IV.—A grenadier of the army of Egypt was wounded by a bayonet, the broken point of which remained, for six weeks, deep in the left side of the pharynx, behind the arch of the palate. The man had entirely lost his voice. The baron with great difficulty, seized the foreign body and extracted it. The voice was instantly restored. The iron had pressed on the laryngeal branch of the par vagum.

Case V.—A subaltern officer of the guards was brought into the hospital on the 7th of June, 1824, presenting a wound in the neck, on the right of the larynx, so small as to be scarcely perceptible. There was great ecchymosis and tumefaction of the whole anterior region of the neck, with deep-seated pain in the chest. Voice and speech were gone—the respiration exceedingly difficult, as well as deglutition. He informed Baron Larrey, by writing, that this wound was made by a small sword. Venesection was repeatedly employed, together with cupping and leechings, which gave some relief. On the sixth day, however, he was menaced with suffocation, and his face was blue and bloated. The baron found him apparently in the agonies of death. In this crisis he determined on tracheotomy. He made an incision through the integuments of some length, and then perforated the space between the thyroid and cricoid cartilages. An immense explosion of air was the immediate consequence, together with the expulsion of several clots of blood. Respiration succeeded, and considerable relief was the result. A paroxysm of suffocation, however, soon after occurred, owing to the obstruction of the orifice in the air-passage, and a tube was quickly inserted. Relief was again obtained; but thirst was intolerable, and the unhappy patient was unable to swallow. In this dilemma, a tube was with great difficulty passed into the stomach, and fluids introduced into that organ. The thirst was moderated, but he could not bear the presence of the hollow bougie, and tore it out himself. He lingered in dreadful agony, till four o'clock the next morning, when he expired.

On dissection, an abscess was found in front of the three superior cervical vertebræ, (which were denuded,) the size of a hen's egg, and which had pressed so much the parietes of the pharynx against the cricoid cartilage and upper part of the trachea, that respiration could not be carried on through the aperture that was made by the knife. A purulent infiltration had also penetrated down into the chest through the cellular membrane.

The baron, in his remarks on this case, does not allude to the possibility of life being saved, if the opening had been made lower down in the trachea, instead of the place which he pitched on for the operation. In all cases where tracheotomy is deemed necessary, the lower down the operation is performed, the more difficult it is—but the greater is the chance of success, for the obvious reason that we are thus the more likely to get below the obstruction.

Case VI.—General Murat, (afterwards king of Naples,) received at the battle of Aboukir, a musket-shot, which traversed the neck from side to side, wounded the root of the tongue, and carried away a portion of the epiglottis. The baron was on the spot, and rendered immediate assistance. The first phenomenon which he observed, was the discharge of the dismembered portion of

the epiglottis, followed by a considerable expectoration of frothy blood. The general was harassed for some days with painful cough, loss of voice, &c. The baron cleared the orifices of the wound both at its entrance and exit, and then introduced an elastic tube into the œsophagus, for the purpose of introducing liquid nourishment and drink into the stomach. This was necessary, as there was no proper valve to prevent the ingress of substances into the trachea. In the course of eighteen days, however, the parts had so accommodated themselves to the loss of a portion of the epiglottis, that this officer was able to swallow with little or no inconvenience.

Case VII.—In this case, which was that of a soldier in Egypt, who was wounded by a musket-ball on the 21st of March, 1801, the whole of the epiglottis was carried away. The poor fellow was devoured by thirst, but could not drink, and harassed with incessant cough. In this dreadful state he continued four days, without any relief. When Baron Larrey saw him, he was in the most piteous and dangerous condition. The baron was enabled to pass a gum-elastic tube down the œsophagus, and through this to introduce liquids into the stomach. By a long and assiduous perseverance in this measure, the life of the soldier was saved, and nature supplied the place of the epiglottis by a contrivance of her own.

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46. *Dislocation at the Sacro-iliac Symphysis.*—An interesting case of this rare accident is related by T. E. Baker, Esq. in the fourth volume of the *Transactions of the Medical and Physical Society of Calcutta.* The subject of the case was a lieutenant of cavalry, a muscular man, aged thirty-six. While on parade his horse stumbled and fell; the rider "was thrown forward over the horse's head, and was on his knees and hands, when the horse in recovering his fall, again fell, struck him on the perinæum with his head, and came with the whole weight of his body upon the left hip; to use his own words, 'the horse appeared to drive him into the ground, he heard the bones make a noise like the rattling of a bag of pebbles, and he thought his bowels were driven out in front, he found he could not stand, and when being placed into the *dooly*, the bones made a snap, and gave him great pain.'

"When placed on his right side, a slight projection was perceptible at the posterior and superior spine of the left ilium; but when lying on his face, the projection was not perceptible, nor was there any pain on pressing the part, nor any appearance of fracture. On turning him again on his right side, pressing on the hip joint, and bending the thigh towards the abdomen, the bones of the pelvis made a harsh grating noise, and the motion gave great pain. On being turned on his back he was easy except a slight pain at the sacro-iliac symphysis.

"At 11 A. M. he was bled to about 24 ounces, when he nearly fainted; his bowels had been opened early in the morning, and he made water only a few minutes before the accident occurred; his pulse was natural, and 76; he had great pain in the urethra in passing his urine, which was tinged with blood; in the afternoon he complained of pain in the scrotum, in the left groin, and over the pubes, to which thirty leeches were applied; in the evening he complained of pain, and numbness in the left groin and thigh, to which warm fomentations were applied; he took light nourishment during the day, was in good spirits, and wrote a note to his brother and myself. We applied a linen roller round the body; made a hole in the bed and bedding, and contrived a sort of leather funnel, so that he should have no occasion to move when the bowels were relieved.

"18th.—Passed a tolerable night, having slept several hours; complains of great pain in making water, which is still tinged with blood; he once heard the bones crepitate when moving unconsciously, but it did not give him much pain; pulse 74 and natural, tongue clean, and moist; has pain higher up in front of the abdomen, above the pubes; bowels not being moved, he took a table-spoonful of castor oil, which having no effect, was repeated at 2 P. M.; applied a soft

leather belt round the body instead of the linen roller, but he cannot bear the lower straps to be tightened, as the pressure gives him pain above the pubes.

"19th.—Was restless during the night, and is much worse this morning, has vomited several times, and is much distressed with hiccough; the urine dribbles away guttatim and gives him much pain. Effusion has taken place into the scrotum and perinæum, but to no great extent. We tried to pass the catheter, but could not succeed, either from the urethra being ruptured, or from a stricture of some years standing; pulse 130, weak and low; cold perspirations on the forehead; has had several loose stools. The hiccough is much relieved by taking ether with camphor mixture, which he says he finds very refreshing.

"20th.—Was very restless in the early part of the night; had two stools; passes more urine and with much less pain; hands quite cold; pulse 145 and very weak; the effusion into the scrotum does not increase, and it has assumed a livid appearance; tongue is clean and moist, but he complains of being very thirsty; has been reading during the morning, is quite sensible, and free from pain, and can scarcely believe that he is in great danger, though he is evidently and rapidly sinking; since the morning the whole of the abdomen is swollen very much and appears to be distended with air; he is continually dozing, but being unable to obtain sound sleep, at 10 P. M. I gave him, at his own request, thirty drops of laudanum, but he rejected it almost immediately. The hiccough still continued, but he remained free from pain, and died at 2 A. M. the following morning, (the 21st.)

"The body was examined ten hours after death; the cavity of the abdomen and its contents had a livid, purplish appearance, as if blood had been extravasated through the whole extent of the peritoneum; it contained about six ounces of blood, on which a small quantity of oil floated; the stomach exhibited effused blood on its external surface, and several clots were discovered on its inner membrane. The liver had numerous and firm adhesions to the diaphragm; there was dark discoloration on its right lobe, and on raising it, a quantity of thick, florid, coagulated blood was found underneath. The intestines were much distended with air, and in several places had the appearance of being bruised; there was a very small opening in the colon less than the size of a pea, we were not certain whether it was ruptured, or whether it was caused by the knife; when the intestines had been exposed to the air for about half an hour, they turned of a greenish hue; on removing them, and detaching the psoas and iliac muscles from the os innominatum, on which there was much effused blood, a total separation of the ilium from the sacrum was discovered, at the sacro-iliac symphysis, and a small transverse fracture of the ilium, nearly two inches in length. On cutting through the recti muscles over the pubes, about an ounce of brown coloured fluid escaped, of an urinous smell. The ossa pubes were disjointed at the symphysis, the cartilage was torn from the bone on the left side, leaving the surface rough, and there was a space of about half an inch between them. The bladder contained a small quantity of urine, and its external and internal surface had a dull red appearance. The urethra was ruptured, just before its passage through the triangular ligament, and some urine had escaped into the adjacent cellular membrane; the stricture was about six inches from the orifice of the urethra.

"From the very great injury the parts had sustained, it may appear surprising, that the patient suffered so little pain; for, excepting when passing his urine, he was quite easy."

A case of this variety of dislocation is related in the memoirs of the Academy of Dijon, and another, which occurred to Dr. Harris, will be found in the fourteenth volume of the Philadelphia Journal of the Medical and Physical Sciences.

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47. *Perforation of the Membrana Tympani.*—It has been believed that in certain cases of deafness, advantage has been obtained from perforating the membrana tympani, but as the wound almost always soon heals, the benefit has been but temporary; and some ill consequences have sometimes resulted from the

inflammation which follows the operation. Dr. Solera, in a communication published in the *Annali Universali di Med.* for Jan. last, states that he is satisfied that these ill consequences are rather attributable to imperfection of the mode of operating, than to the operation itself, and he recommends it to be performed by introducing a piece of gum elastic catheter into the external meatus down to the tympanum, and through this, to pass a probe armed with caustic potash. When the potash touches the tympanum, a rotatory motion is to be given to it. The loss of substance thus occasioned, prevents the future obliteration of the opening.

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48. *Fracture of the body of the Scapula.*—James Syme, Esq. relates in the *Edinburgh Medical and Surgical Journal* for April last, a case of this rare accident. It occurred in a man aged forty-five, who, whilst carrying a heavy stone in a handbarrow, across the sunk area of a house, the wooden gangway broke, and he was precipitated to the bottom. He fell first, and the stone struck him on the back. The lower portion of the scapula was drawn upwards, and projected outwards by the action of the *teretes* muscles, together with the *latissimus dorsi.* Mr. S. put a cushion of tow in the axilla, another over the lower part of the scapula, and then applied a spica bandage, under which treatment the patient felt quite easy, and was dismissed free from uneasiness or deformity in three weeks.

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49. *Fracture of the edge of the Acetabulum.*—Dr. M'Tyer has given in the *Glasgow Medical Journal* for February last, some interesting particulars respecting four cases of fracture of the edge of the acetabulum, an injury of which little notice is taken by any surgical writer, and yet it would seem not to be of exceedingly rare occurrence, since three of these cases occurred within little more than twelve months in the Glasgow Royal Infirmary. In the first case, a fracture was found to pass through the bottom of the right acetabulum, from below upwards and forwards, while a wedge-shaped piece of bone, about an inch and a half long, was separated from the upper and posterior margin of the cotyloid cavity. When the muscles were removed by dissection, this portion of bone was held in place by the capsular ligament, and a few fibrous bands at its superior margin, which here formed a kind of hinge. When the head of the femur was brought into its normal situation in the acetabulum, the separated portion of the margin of the acetabulum fell into its proper place. The capsular ligament was lacerated at the lower and posterior part, the triangular ligament was also separated from the bottom of the acetabulum, and there was no resistance offered to the head of the femur raising the detached portion of bone, passing under it, and then gliding on to the dorsum of the ilium, which situation, while the patient was alive, it always assumed, when the thigh was left to the uncontrolled action of the muscles attached to it.

The second case differed from the first, only in this, that the portion of the margin of the acetabulum which was separated, was chiefly from the upper part.

The third case differed from the two former in the situation of the fracture, and there was some dissimilarity in the position of the limb of the affected side, from that of the other cases In this example, as in the first, a fracture passed through the bottom of the acetabulum, but here it was nearly transverse. From that part of the acetabulum opposite the ischiatic notch, a thick, somewhat triangular-shaped piece of bone was separated, removing an inch and a half of its margin; another portion, containing about half an inch of the brim of the acetabulum, was also removed, a little lower than the former, and this adhered to the extremity of that portion of the cotyloid ligament from which the largest piece of detached bone had been entirely separated. The head of the femur was lodged over the ischiatic notch on the pyriformis muscle; the largest portion of bone separated from the ilium was pushed towards the coccyx, whilst the head of the femur had passed under the smaller portion. The cap-

sular ligament was a good deal lacerated at the posterior part; but the anterior, which is much stronger and fibrous, remained entire, and the round ligament was torn across near the bottom of the acetabulum.

The fourth case occurred in a male subject dissected at La Pitié. Nothing unnatural was observed in the position of the limb to indicate that any disease had existed, and it was only when dissecting the pelvis, that more than usual roughness and prominence were observed occupying the upper half of the posterior margin of the acetabulum; this was at first supposed to be an exostosis of that portion of the ilium, but on more minute examination, Dr. M'T. found it to arise from a portion of bone which had been separated and united with a slight deviation from its natural position; the round ligament was entire, and as the capsular ligament had been in great part removed before Dr. M'T. saw it, he could not ascertain if it presented any appearances to indicate that laceration had at one time been present.

The first case was that of a labourer, aged twenty-seven, on whose back a number of bricks had fallen, while he had his right knee placed on the back of a trench. There was much tense and painful swelling of the right buttock, the right leg was shortened about an inch and a half, bent, and the *toe turned a little outwards.* The limb could be moved without much difficulty, but every motion gave him pain. When rotated, the trochanter revolved, or seemed to revolve, upon a shorter radius than usual, and a crepitus was distinctly felt when the hand was placed over it. He had also pain in the groin, and in the lower part of the abdomen. The pulse was small, and the skin cold. On fixing the pelvis, and making extension, the limb could easily be brought to the same length with the opposite, and the deformity at the hip in a great measure disappeared, but the least relaxation immediately reproduced the retraction, and the rounded form of the hip.

In the second case the limb was shorter than the opposite; the knee slightly bent, and turned a little forwards and inwards, and the toe rested on the tarsus of the opposite foot. The trochanter major was less prominent than natural, and more approximated towards the anterior spinous process of the ilium; there was less flattening of the hip than is generally observed in dislocation. Crepitus was heard when the limb was not extended.

In the third case, the appearance of the limb differed from the first and second, in this, that hardly any shortening was observed, but the toes were stretched downwards, and turned slightly inwards. It was immediately supposed to be a dislocation of the femur; but on attempting to move the limb, very distinct crepitus was heard, and though a good deal of force was used in pulling, we could make but little change in the position of the head of the bone, probably from the rigidity of the muscles, occurring after death.

In the fourth case it is not known whether any particular symptoms accompanied it when produced; it is not even certain that the head of the bone had been displaced, for the round ligament was found entire; if there was displacement, the head of the femur would have rested on the dorsum of the ilium, and might, in all probability, have been mistaken for a fracture of the neck of the femur.

These fractures of the acetabulum, it is evident, may, on even a pretty accurate examination, be mistaken for a fracture of the neck of the femur, or a dislocation, and though there is no symptom which by itself will indicate either of these injuries, yet a combination of symptoms will pretty clearly point out the one from the other.

From the appearances which the cases presented previous to dissection, a different injury from the true one was suspected. The first case was taken for a fracture of the neck of the femur, and the symptoms differed in no respect from those set down by writers on the subject. There was the diminished length of the limb—the crepitus on rotation—the facility of extension and reduction. The only symptom which rendered the case doubtful was the ultimate turning inwards of the toes, and even that has been given as a symptom usually accompanying fracture of the neck of the femur by Paré, Petit, and B. Bell. Desault

has also mentioned cases which he says were cured without any shortening of the limb, where this symptom was present; and it is not denied by any writer that it may occasionally occur. The second case was in like manner mistaken, and the third was supposed to be a dislocation, from the appearances which the subject presented, though the crepitus rendered this doubtful. The limb was slightly shortened, and the toes turned downwards and inwards, and the limb could not be drawn into its natural position. It would probably have been different had the patient been alive, for this immobility in all probability arose from rigidity of the muscles occurring after death.

That combination of symptoms which indicates fractures of the edge of the acetabulum with displacement of the femur, of which all are not present either in fracture of the neck of the femur, or dislocation of the femur on the dorsum of the ilium or ischiatic notch, is the following:

The limb of the injured side assumes the position of one of the two dislocations mentioned. There is a crepitus previous to extension being made. The reduction of the limb to its natural position is easy, but there is difficulty in retaining it there. If firm pressure is applied over the buttock after extension has been made, no crepitus is observed. There is less flattening of the buttock than in dislocation. There is increased mobility of the limb after extension, and the pain experienced on rotation of the limb being made after reduction, is less than it was before that. They differ from dislocations without fracture of the acetabulum, therefore, in the presence of crepitus—in the facility of reduction and the immediate return of the femur to its unnatural position, when left to the uninterrupted action of its own muscles. They differ from fracture of the neck of the femur, in the position of the limb, the toes being turned inwards, and in the presence of crepitus before extension has been made.

Dr. M'T. is of opinion that in some of those cases of reported cure of fracture of the neck of the femur within the capsule, where no autopsy was obtained, and especially such as presented amongst the symptoms the toes turned inwards, there was probably fracture of the edge of the acetabulum, while the femur was entire.

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50. *Case of Fracture of the Neck of the Femur terminating in Suppuration.*—The following case related by Dr. M'Tyer, in a recent number of the *Glasgow Medical Journal*, (Feb. 1831,) is interesting, as showing that fractures implicating the hip joint, occasionally terminate in suppuration. It is also remarkable for the little uneasiness experienced after the accident, in which circumstance it resembles a case given in the fourth volume of the Memoirs of the Academy of Surgery, in which the patient walked home after the fall, and even got up the next morning. A weak emaciated woman, aged fifty-six, was sent to the Glasgow Royal Infirmary as a case of erysipelas of the thigh, and two days afterwards was remitted from the physicians to the surgeons' ward, when she presented the following appearances. There was considerable redness and swelling of the left thigh, and the foot and leg had an œdematous appearance, pitting distinctly on pressure. The red part of thigh had a defined margin three inches above the patella, and beneath that the skin was of its natural colour. On the outer part of thigh, and over the upper part of sartorious muscle, there was a prominence in the swelling, which had a distinct fluctuating feel, and the skin covering it had a yellow tinge. She experienced severe pain over the whole thigh; no crepitus could be felt in the limited motion and extension which she could submit to; an accurate comparison of the length of the limbs could not be made. She complained of pain in her hypochondrium, general debility, and want of appetite. Pulse 120, very feeble.

The swelling of the thigh had appeared three days previous to her admission into the hospital, and was preceded by rigors. It appeared that three months before, she had fallen on the left side, and that from that time she had had a slight halt in walking; but the injury had not confined her from her usual occupations. A puncture was made at the fluctuating part, a large quantity of puru-

lent matter was discharged, and for a few days she felt easier; the discharge, however, continued very copious, and she gradually became weaker, till she died on the 31st May, eleven days after admission into the Infirmary.

On inspecting the body, the head of the femur was found to be fractured within the capsule; and the abscess, which was situated in the thigh, communicated through the lacerated capsular ligament with the hip-joint.

MIDWIFERY.

51. *Follicular origin of some Vaginal Tumours.*—It has been shown by Sir Astley Cooper, that some encysted tumours consist in enlargment of cutaneous follicules; and it has been at least rendered probable by Mr. HEMING, that some of those tumours, which are known occasionally to occupy the pelvis and obstruct parturition, have a similar origin. In a communication in the *Edinburgh Medical and Surgical Journal* for January last, Mr. Heming states that he has carefully examined the bodies of two women in whom he found tumours of this description projecting into the vagina; in one there were two of these tumours, in the other there was a single one as large as an egg. On a minute examination of their internal structure, it was evident that they consisted of obstructed lucunæ, which had thereby become dilated into a cyst, and distended by a gelatinous fluid; a continuation of the mucous membrane of the vagina into the tumour, and a reflection of this membrane forming the lining to the latter, could be traced distinctly in the smallest tumour.

The tumour in the following case, related by Mr. H. he is satisfied was of the same nature. "Mrs. Hollingsworth came to me in April, 1822, with a tumour in the vagina, which a surgeon whom she had previously consulted told her was *prolapsus uteri*. I found an oval tumour situate between the *vagina* and the *rectum*, its attachments to either of these parts were so loose, that I could, by putting my finger beyond it, hook nearly the whole of it out of the vagina. It could not be *prolapsus*, for the neck of the uterus could be felt above it in its natural situation; and the same circumstance, together with the absence of the symptoms of pregnancy, proved that it could not be retroversion of the uterus. As the tumour, from its situation and bulk, was very inconvenient, the patient wished to have it removed; but before doing it, I advised her to consult Mr. Vincent, who agreed with me in thinking that this might be done with safety. I therefore proceeded to perform the operation. On cutting into the tumour, I found that it consisted of a cyst containing a considerable quantity of glairy fluid. This was evacuated, the cyst was left in its situation, and the patient was well in a few days. Three months elapsed, at the end of which time the patient came to me again, stating that the tumour had returned; that it was considerably larger than the first time she applied to me; and that she wished I could remove it entirely. This I did by simply dissecting it out. The operation was attended with very considerable hæmorrhage, which, however, was stopped by plugging the vagina with lint, and in three weeks she was quite well.

The great point is the diagnosis. This may be distinctly established by carefully tracing the origin of the tumour. The conduct of the practitioner may then be both prompt and confident. A free incision at the period of parturition, and excision at any other time, will safely relieve or cure the patient."

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52. *Case of Pregnancy.*—The following is exceedingly interesting as showing the necessity of taking pains in all cases to make a careful diagnosis, and also as confirming the value of the stethoscope as a means of detecting pregnancy. We derive this case from a clinical lecture delivered by Dr. ELLIOTSON, at St. Thomas's Hospital, and which is published in the *London Medical Gazette*, for February last.

"When I came to the hospital on Thursday, I found one of my beds appro-

priated to a young woman with a large abdomen, who said that her doctor—Dr. Fiddle, had told her she had got the dropsy, and had better come here to be cured.

"Now, when I was a pupil, I saw a very sharp, clever man, admit two cases of women with beg bellies, and prescribe for them squills, acetate of potash, and other antihydropics; and before the week was out each of these persons had a little one sucking at her side. However, this would have been a very disagreeable and discreditable circumstance now, in these days of diagnosis, and therefore I condescended, (or my physicianship condescended,) in the case of this patient to use mechanical means for the purpose of investigating her state; and I not only inquired whether there was fluctuation or not, as physicians are allowed to do, and ascertained that there was none, but I had her undressed, as I make it a rule in all cases of affections of the trunk, whenever there is a suspicion of organic disease. I believe it is considered by some to be derogatory to the dignity of a physician to use his hands or his ears; but as nature has given us both ears and hands, for one I am very grateful for the gift, and whenever the phenomena of touch or sound occur, I consider them equally worthy of notice as phenomena of sight, or as details given, and despise not the assistance afforded me by the Creator. I therefore mechanically examined the whole abdomen of this young lady, and found there was a considerable tumour of the abdomen, quite hard; and the tumour grew broader and broader upwards, till, at the commencement of the epigastrium, I felt it well defined, its edge rounded off, and its shape something like a segment of a circle. On looking at the breast, the areola appeared of the darkest brown. All this, of course, made me very suspicious. At one part of the tumour, the upper part, near the right hypochondrium, I found a projection, smooth, firm, and globular, as if a lobule was there. While my fingers were upon it, however, it disappeared—away it went. On applying my fingers a second time I found it again, but more in the centre; then it receded, and I felt it lower down. While I was feeling it there, it gave such a kick that I started and withdrew my hand. The nature of the case was perfectly clear, but I said nothing about it; and asking the maiden how long she had had the dropsy, she replied three months. I asked her if she still menstruated, and she replied that nothing of that kind had happened for ten months. I asked her if she was ever sick, and she replied every day, and all day. I think it very likely, from all this, and what I have seen in other women, that she really had no idea of being pregnant. I believe that many women become with child, and are not at all aware of it; not that they are not aware that they have taken all the proper means for getting into that state, but that they have no idea that those means have taken effect. It is so common for women to indulge, and think no harm can come of it, because so frequently no harm does come, and they perhaps themselves have so long indulged with impunity—it is so common for women to suppose that no harm can come to *them* from it, and not to know that, in these matters, sometimes a very little goes a great way. I know that some are impostors, and come to the hospital declaring themselves not with child while they know that they are, and protest and pretend they are so virtuous that the thing is out of the question—quite impossible; yet I do believe that many are deceived. This woman, I think, must have been deceived, and for this reason—she told me at once, honestly and frankly, that she was constantly sick, and that she had not menstruated for many months. Now, I think if she had really wished to deceive, she would not have acknowledged these two circumstances—I think not.

"I have been told by gentlemen who practise midwifery, that single women are frequently so little aware of being with child, that they have actually been taken in labour and yet would not believe their real state. I have been told of women who suffered the pains of labour, and without being at all convinced, and have still persisted that they were not with child. Of course it would be absurd any longer to attempt deception, and I think such conduct must generally arise from ignorance of their real condition. I think that single women in

the family way have frequently no idea how very easy it is for them to become so. A man cannot be too tender towards the female sex, and I therefore did not reproach her with imposture, nor even declare her state to her in express words. I said nothing more than that she had not got the dropsy, and requested her to listen to the little one's heart, which beat distinctly 120 in a minute, while the mother's pulse was only 76.

"This case is interesting, particularly on this account: when we applied the stethoscope to the abdomen, low down on the left side, the child's heart was heard distinctly pulsating with a double beat. I myself counted it 120, while the mother's pulse was 76. It was perfectly distinct: there could be no doubt at all about it, and several gentlemen examined as well as myself. I had never heard the fœtal heart pulsating before."

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53. *Premature Births.*—Mr. J. Greening, of Worcester, details in the *Midland Medical and Surgical Reporter* for February last, the case of a female delivered at the sixth month. The child was so small and feeble, Mr. G. says, that he requested the nurse to put it by, not thinking it possible for it to live; nevertheless it did so.

This same woman was subsequently delivered between the seventh and eighth month, and the child of which she was delivered this time, also lived.

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54. *Abdominal Fœtation.—Gastrotomy successfully performed by* Gais *of Wiesbaden.*—Dr. Nægele, of Heidelberg has communicated to the *Medical Gazette of Paris,* April 11th, 1831, an account of an abdominal fœtation, in which gastrotomy was successfully performed. The subject of this case was a female aged 35, who had had a child at the age of 20, and became again pregnant in November, 1826. The commencement of pregnancy was accompanied with uneasiness, swelling of the breasts, distention of the abdomen, occasional vomiting, &c. The menses reappeared every eight or fifteen days. Towards the end of the fifth month a tumour was perceived in the abdomen, which escaped from under the hand on pressure. At the fourth month she had a fainting fit which continued for ten hours. A great quantity of coagulated blood was discharged from the vagina, and after that time there was every eight or fifteen days' a discharge of a brownish liquid, preceded and accompanied with violent pains in the loins.

On the 20th of March, 1827, the uterus was observed between the pubis and umbilicus, developed and situated as in natural pregnancy, but a fœtus might be discovered in the epigastric region.

At the termination of the seventh month, the abdomen became uniformly distended, the motions of the fœtus were perceptible, and afterwards became painful to the mother. On the 18th of August, the movements of the fœtus were so violent as to render it necessary to apply constant pressure. In a few days the fœtus died. On the 21st of August, the woman was in such pain as to request that she might be relieved by an operation. On the third day after the death of the fœtus, puerperal fever came on, which ceased in the ninth day. The 7th of September, eighteen days after the death of the child, the membrana decidua was expelled from the uterus. The woman began to improve in health, and the operation was postponed until the 12th of October. On making an incision, the sac containing the fœtus was found immediately beneath the muscular layer, and adhered to the peritoneum over a considerable space. The fœtus was easily extracted, the membranes and cord were in the sac, and partly putrefied. The placenta adhered so as not to be removeable to the vertebral column above the umbilicus; it had no lobules like a healthy placenta. The lips of the wound were brought together, partly by sutures and partly by adhesive plasters. The sixteenth day after the operation, the placenta was detached, accompanied with a profuse hæmorrhage, and preceded by violent pains in the loins. A fœtid sanies mixed with portions of membrane and pulpy substances, flowed for several months from the wound,

and which retarded the cure. During the following summer, a little serous fluid sometimes flowed from the wound, which has since entirely cicatrized, and the woman has become healthier than before her abdominal pregnancy. There are but few instances on record of gastrotomy having been successfully performed in cases of extra-uterine pregnancy. In the case of Dr. Gais, the success may in great measure be attributed to the adhesion between the cyst containing the fœtus and the peritoneum, which prevented a prolapsus of the intestines and the admission of air into the abdominal cavity.

Weinhardt relates a case* in which the fœtus was closely united to the peritoneum and mesentery, and in which gastrotomy was performed with success. Dr. Ruth gives in Graefe and Walther's Journal, Vol. VI. No. 3, for 1804, an account of a case in which a uterine pregnancy took place, and terminated favourably whilst the mother was carrying an extra-uterine fœtus. This last was extracted by means of gastrotomy, and the mother recovered from the operation. Dr. Bulh, a German physician, also relates a successful case, see *Archives Générales*, 1825.

Cases in which the operation was unsuccessful are related by Bouillon,† Navara‡, Plaignaud, Masheürt and Dubois,§ F. de Goizueta,‖ and Mott.¶

In a case recorded by Dr. Heim, the fœtus ruptured its envelope, and escaped into the abdominal cavity; it was extracted alive, but the mother died.

MEDICAL JURISPRUDENCE.

55. *Are there certain Questions which a Medical Man in a Court of Justice may refuse to Answer?*—This is a very important question, and one, the solution of which has often been demanded of us. It will appear from the following extracts, which we make from a recent No. of the *London Medical Gazette*, that medical persons have *no privilege whatever* not to disclose circumstances revealed to them professionally; and that the only communications privileged are those to their legal advisers entrusted with those communications as such. A leading case on the subject is Wilson *v.* Rastall, 4 Ter. Rep. 754.

Mr. Cæsar Hawkins *examined by* Mr. Dunning. Q. Mr. Hawkins, are you acquainted with the lady at the bar? and how long have you been so?—A. A great many years: I believe about thirty. Q. Are you acquainted with the present Lord Bristol, and how long have you been so?—A. I have had the honour of knowing the Earl of Bristol nearly as many years. Q. Do you know of any intercourse between my Lord B. and the lady at the bar?—A. Of an intercourse certainly: of acquaintance undoubtedly. Q. Do you know from the parties of any marriage between them?—*Mr. Hawkins.* I do not know how far any thing that has come before me in a confidential trust in my profession should be disclosed, consistent with my professional honour. (The question and answer were here repeated.) *Mr. Dunning.* I trust your lordships will see nothing in my question that can betray confidential trust, or dishonour to Mr. Hawkins in giving it. My question is simply, whether Mr. Hawkins knows from the parties of any marriage between them?—*Lord High Steward.* The question that was asked by the counsel at the bar, is, "Whether the witness knew, from any information of either of the two parties, that they were married?" The witness objects to it, whether he is to answer any questions that are inconsistent with his professional honour. Your lordships are to determine whether the question put by the counsel at the bar shall be asked? *Lord Mansfield.* I suppose Mr. Hawkins means to demur to the question upon the

* Beschreibung einer merkwurdigen operation durch den Kaiserchnitt. Bautzen, 1802.
† Bulletin de la Faculte Medecine de Paris, Tom. VIII. p. 340.
‡ Journal Universel des Sciences Medicales, Juillet, 1826, p. 119.
§ Journal de Med. Chir. et Pharmacie, 1811. Tom. xxii. Decembre.
‖ Froriep. Notizen. Vol. VIII. No. 7.
¶ New York Med. and Phys. Journal, December, 1824.

ground that it came to his knowledge some way from his being employed as a surgeon for one or both of the parties; and I take for granted, if Mr. Hawkins understands that it is your lordships' opinion, that he has no privilege on that account to excuse himself from giving the answer, that then, under the authority of your lordships' judgment, he will submit to answer it. Therefore, to save your lordships the trouble of an adjournment, if no lord differs in opinion, but thinks that a surgeon has no privilege to avoid giving evidence in a court of justice, but is bound by the law of the land to do it, (if any of your lordships think he has such a privilege, it will be a matter to be debated elsewhere, but) if all your lordships acquiesce, Mr. Hawkins will understand that it is your judgment and opinion, that a surgeon has *no privilege*, when it is a material question, in a civil or criminal cause, to known whether parties were married, or whether a child was born, to say that his introduction to the parties was in the course of his profession, and in that way he came to the knowledge of it. I take for granted, that if Mr. Hawkins understands that, it is a satisfaction to him and a clear justification to all the world. If a surgeon was *voluntarily* to reveal these secrets, to be sure he would be guilty of a breach of honour, and of great indiscretion; but to give that information in a court of justice, which by the law of the land he is bound to do, will never be imputed to him as any indiscretion whatever.

The question was then put once more, and answered directly by Mr. Hawkins.

And *Mr. Justice Buller*, in giving judgment in the case of Wilson *v.* Rastall, above alluded to, thus proceeds:—

"I take the distinction to be now well settled, that the privilege extends to those three enumerated cases, (counsel, solicitor, and attorney,) at all times; but that it is confined to these cases only. There are cases to which it is much to be lamented, that the law of privilege is not extended; those in which medical persons are obliged to disclose the information which they acquire by attending in their professional characters. This point was very much considered in the Duchess of Kingston's case, where Mr. Cæsar Hawkins, who had attended the Duchess as a medical person, made the objection himself, but was overruled, and compelled to give evidence against the prisoner."*

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56. *Can a woman, during the whole course of Utero-gestation, be ignorant that she is Pregnant?*—Most women accused of infanticide, allege in their defence that they were ignorant of their being pregnant, and some writers on medical jurisprudence admitted its possibility in cases in which the woman has conceived during sleep, in a state of complete drunkenness, or finally in a disease which deprived them of their senses. The motions of the fœtus, however, and other signs of pregnancy must, in most cases, make the woman aware of her condition. M. Orfila nevertheless quotes many cases of married women who had previously had children, and who had no motive for concealing their pregnancy, who went on the full term of gestation without ever suspecting their condition. Dr. Lozes has related in the *Archives Générales* for February last, the two following cases, which are confirmatory of the opinion of the learned medical jurist just alluded to. Under the head Midwifery, Art. 53, p. 521, will be found the opinion of Dr. Elliotson on this subject, and which coïncides with that of MM. Orfila and Lozes.

Case I.—I was consulted, says M. Lozes, in the month of August, 1819, by a female to whom I had before rendered professional services, and who placed the most implicit confidence in me. This woman, taller than common, and of a very thin habit, had the abdomen very much swelled, to such a degree that she thought herself attacked with abdominal dropsy. After having examined her with care, I told her that I believed her to be with child: to which she frankly replied, that she did not think so, and for the following reasons:—She told me that she was forty-six years of age, that she had ceased to menstruate in her forty-second year, that she had entered the house of a bachelor as a house-

* See State Trials, trial of the Duchess of Kingston for bigamy, A. D 1776, vol. xx. col. 572-576.

keeper, that they had always lived in connubial state, always adopting *precautions*, (these were her words,) but that for the four years past, when she ceased to menstruate, they thought it unnecessary to adopt these precautions: she also added that she did not experience any of the inconveniences observed by pregnant women, and that she never felt any movements in her abdomen. It is evident from what I have just related, that this woman spoke with frankness, and yet I thought proper to delay for a while prescribing the treatment suitable for the disease under which she believed herself to labour. About six weeks afterwards, I was called to this same woman, and brought her to bed of a well-formed child.

CASE II.--In the month of October, 1824, being at Rheims, a physician of that city, (Dr. Noel,) requested me to go with him to visit a lady who for twenty-four hours past had suffered from violent pains through the whole extent of the abdomen, and which had gone on increasing in spite of diet, semicupia and emollient fomentations. Dr. N. told me that he believed the uterus to be affected, for, said he, during these six hours past, a sanguinolent sanies has been flowing from the vulva. On our arrival at the patient's we found her seated, and only suffering from pain at intervals: she informed me that she was fifty-two years of age, that she had been married thirty years, and had her menses regularly until forty-five years old, and always enjoyed good health, but had never borne children.

As there flowed from the vulva matters tinged with blood, M. Noel solicited the lady to allow me to make an examination, to which she consented, and I own that I was astonished at finding the head of a child ready to pass the superior strait.

When I announced that the patient was about to be brought to bed, both she and her husband were not a little astonished, she, who had always been corpulent, assured me that the volume of her abdomen had not been enlarged, and that she had never felt any movements of the child. At all events, I determined, two hours after, to apply the forceps, and this lady was delivered of a living and well-formed child, which she suckled herself.

I ought to add in conclusion, that Dr. Noel had only seen this lady once, from the time in which she had been taken with the supposed colics. It was this which I believe led him into the error.

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57. *Singular Trial for Infanticide.*—"Mr. Beasse, a person of tolerable station on the Island of Guernsey, carried on an illicit intercourse with his servant, Sarah Elliot, the consequence of which was, that she became pregnant. Early in the month of May he mentioned the latter circumstance to a friend, and confided to him his intention of having the girl sent to the adjoining coas of France, or to England, when the period of her delivery approached, in order to escape the scandal. On the night of the 10th of June following, however, her delivery took place in his house—prematurely, according to the statements of the girl herself, and of Mr. Beasse in his declaration—and in all probability at least unexpectedly, for he had a party of friends with him that evening till midnight, and when they left his house he accompanied them, and did not return home till half past one, although he knew she was unwell. Medical advice was not procured. The girl was delivered about four or five in the morning of the 11th, of a still-born child, as she represented, and in order to keep the affair quiet, and allow her to recruit her strength, she was locked up in her room, and a false story told of her having gone to visit a brother in the neighbourhood. It is particularly worthy of remark, that among the steps taken to spread this story, the girl herself, within two hours after her delivery, went to the window of her room, and told her pretended intention to a boy in the garden, who stood about forty paces off. About the same time Mr. Beasse went to a friend, the same he had consulted formerly, to ask his advice what he should do; and at this person's recommendation he allowed a surgeon to visit the girl at mid-day, who found her in bed with the after-birth not expelled,

and who examined the body of the infant, without being able to remark any external appearance of violence. Mr. Beasse likewise made inquiries as to the best mode of secretly burying the child, but no means could be devised that satisfied him, by which it might be buried in the church-yard. Various circumstances having excited a suspicion of foul play, the house was visited on the morning of the 14th by a constable with two medical men. Mr. Beasse admitted that a child had been born; stated that it had either been still-born, or at least when he was summoned to the room by his servant, that he found it lying on the floor amidst a quantity of blood, and respiring feebly; and after several attempts at evasion, he conducted the constable to a spot in his garden where he had buried it. The mother, when questioned on the subject, said she was only in her fifth month, that after she was taken in labour, she went to bed and there fainted; and that she was ignorant of the sequel, till she came to herself and found the child on the floor dead. She also stated that baby-linen had been provided for the child; but neither she nor Mr. Beasse were able to prove this.

"Both Mr. Beasse and the servant were indicted for child murder on the 23d of October last. The general evidence brought forward on the trial was nearly the same with what has just been detailed, with the addition of some of the usual contradictions in the declarations of the prisoners, which it appears unnecessary to enumerate. The medical evidence is very minutely reported as delivered by Messrs. O'Brien and Hoskins, who examined the body, and Mr. Mauger, who visited the girl on the morning of her delivery. All of them agree that the child was not immature, but apparently born at the full time, and Mr. O'Brien adds, in confirmation of this opinion, that the state of the female prisoner on the 11th of June, four days after her delivery, corresponded with that of one who had brought forth a nine-month's child. The data in support of these statements are not given, so that we cannot judge of their accuracy. But the opinion founded on the state of the woman is obviously much overstretched; at least we question whether any experienced accoucheur would venture to say, from the state of the mother four days after delivery, whether she had given birth to a seven, eight, or nine month's child.

"The body of the child was buried in a napkin, which was much besmeared with blood and meconium; and some florid blood was oozing from the mouth; but no other sign of violence was visible outwardly. On clearing away the blood from the inside of the mouth the surgeons discovered a lacerated wound under the tongue, which separated the frænum linguæ a considerable distance backward. The lower jaw being then detached from the face, the posterior fauces were seen covered with blood; and when this was removed, two other lacerations were found, one on each side of the palate, extending backwards into the throat; the throat beyond the lacerations was filled with blood, on removing which a fourth laceration was discovered, wide enough to admit the fore-finger penetrating the upper and back part of the gullet, and laying bare the bodies of some of the upper vertebræ. The cellular tissue between the gullet and windpipe was ecchymosed or infiltered with blood along the whole course of the windpipe down to the root of the lungs. The lungs were high, expanded, and free from putrescence; their colour pale pink and mottled; they crepitated when handled, and when cut gave out air and a little blood; they were very buoyant in water, and when a portion was squeezed firmly it expanded again and still floated. The heart was healthy. The umbilical cord was lacerated about three inches from the navel, and had not been tied. In the abdomen blood was found besmearing the whole viscera. This proceeded from a wound in the rectum, entering from within about two inches above the anus, passing about two inches more between the coats, and then piercing the peritoneal covering; and the course of the wound between the coats was marked by a line of ecchymosis. This wound appeared to have been made with a sharp instrument. The rectum contained scarcely any meconium; but the rest of the great intestines contained the usual quantity.

"From these facts, both of the medical gentlemen agree that the child was

born alive and breathed, and that it had been put to death by means of some instrument introduced into the throat, and also into the anus. They deny that it is possible to produce such injuries after death, even immediately after it; they maintain that, in the circumstances of the case, the hydrostatic test, together with the ecchymosis in all the wounds, is certain proof of the child having been born alive; they are of opinion that the wounds might occasion speedy death, but that on the whole, the wound in the anus was not calculated to produce death with great rapidity, and that those in the throat, though attended with ultimate danger, could not prove immediately fatal, except by the concurrence of suffocation, probably produced at the same time by the rude means employed. In particular, however, they express great doubts whether the woman could have inflicted these wounds herself immediately after delivery. In answer to a query as to this point, Dr. O'Brien says, 'the word *possible* has so wide a range, that I would beg leave not to answer it; but a person in the situation of Sarah Elliot, suffering mentally and bodily, as she then must necessarily have done, weltering in her blood, and only in part delivered, I would almost say must be more than human to possess the strength of purpose and steadiness of hand necessary to perpetrate at that time the excesses committed on that child.' Mr. Mauger also thinks it almost impossible. Mr. Hoskins waived replying to the query, on the ground that he had not seen the woman before or after her delivery.

"In opposition to this evidence against the prisoner, Mr. Curtis, a surgeon, was examined on the opinions given by Messrs. O'Brien and Hoskins, and states —that the child might have died of hæmorrhage from the untied umbilical cord —that it might breathe in the passages before delivery so as to expand the lungs as remarked by the inspectors—that he has known women resume their daily occupations on the very day of their delivery; and has no doubt some are in such a state as to be able to kill their child—that if a woman, as in the prisoner Elliott's instance, is brought to bed at four or five in the morning, in two hours is able to go to her window and talk to a person forty yards off so as to be heard, and on the same day resumes her daily occupations and washes her room, she would be able to destroy her child immediately after delivery— that he has actually met with instances of women who immediately after delivery were so strong that they could have destroyed their children—that the wounds inflicted in the prisoner's child required little force to inflict them— that ecchymosis may be produced on the dead body.

"Such was the evidence. Both prisoners were found guilty. Mr. Beasse was found guilty as principal, and sentenced to death, which sentence was subsequently put in execution; and Sarah Elliot being found guilty as accessory, was sentenced to make the *amende honourable* before the court, and then to six years' banishment from Guernsey.

"We have but a few remarks to add to this interesting narrative. It is clear the child was born alive. This is proved by the state of the lungs, with the ecchymosis and internal hæmorrhage, which, notwithstanding Mr. Curtis's opinion, could not have occurred after death. It is also clear that the child was put to a violent death, the wounds and hæmorrhage being sufficient to account for it, and such as put accidental death quite out of the question. The only difficulty in the case was to fix on the actual murderer. One or other of the prisoners certainly was the murderer; for no one else was in the house at the time. But it is by no means so clear to our minds, as it seems to have been to the court, which of the two was the guilty person. Notwithstanding the opinion of Mr. O'Brien and Mr. Mauger, there cannot be a question among well-informed medical jurists, that the female prisoner might have killed the child herself immediately after delivery, as Mr. Curtis very correctly maintained. Such being the case, we do not see any evidence to prove who was principal and who accessory; or rather—for the difficulty now stated would in *British* law be no impediment to inflicting the full pains of law on both as murderers—we see no satisfactory proof in the evidence, that there was an accessory at all,

and no proof which of the two did the deed. If we suppose that either one or the other murdered the child, there is nothing in the conduct of the remaining party, or in the evidence generally, which might not be perfectly well explained on the principle that he or she acted with the view of keeping quiet what the murderer was endeavouring to pass off as the delivery of a still-born child. We are of opinion, then, that the court acted hastily in executing the prisoner Beasse, and feel convinced that he would have escaped either in an Engl'sh or Scotch court of justice."—*Ed. Med. and Surg. Journ. April*, 1831.

MEDICAL STATISTICS.

58. *Medical Statistics of the Royal Maternity Charity.*—During the year 1830, there were delivered in the Eastern District of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham,

2221 Women, *of which cases*

26 were twins—about 1 in every 85½ cases; of these, in 15 cases both heads presented; in 9, the presentation was a head and a breech: in 1, both were breech; and in 1, a head and a shoulder.
1161 were males.
1086 were females.
2181 were presentations of some part of the head; of which
8 were face presentations—about 1 in every 273 cases.
59 were presentations of the breech, or some part of the lower extremities —about 1 in every 39 cases.
7 were presentations of the shoulder, or some part of the upper extremities—about 1 in every 321 cases, of these, 1 was a second child of twins;
1 was terminated by the process called *spontaneous evolution;* and 1 was complicated, with an adherent placenta.
1 was an entire placentar presentation.
1 was a partial placentar presentation, in which, as well as in the entire placentar presentation, it was necessary to deliver by *turning*, as the hæmorrhage did not abate on the membranes being ruptured.
7 were complicated with *dangerous* hæmorrhage before delivery; not the consequence of placentar presentations;—about 1 in every 317 cases. All these cases were delivered naturally, the hæmorrhage ceasing or greatly diminishing on the membranes being ruptured.
20 were complicated with an adherent, or retained placenta, requiring removal by the introduction of the hand into the uterus—about 1 in every 111 cases. One of these cases was after a shoulder presentation; and two of them were under twins.
11 were complicated with *dangerous* hæmorrhage after the natural expulsion of the placenta—about 1 in every 202 cases.
1 was delivered by craniotomy, under hydrocephalus.
4 were delivered by the forceps; two by the long—two by the short: about 1 in every 555 cases.
4 were complicated with puerperal convulsions; three before delivery—one after; about 1 in every 555 cases. One of the patients was delivered by *turning*, the other cases terminated naturally.
1 case of apoplexy occurred twenty-four hours after labour.
In 2 premature labour was induced in consequence of narrow pelvis—about 1 in 1110. Both the children were born dead. For one of these patients I had induced labour prematurely three times before; the other I had delivered by means of the long forceps twice previously.
1 fœtus was acephalous.

In 1 case there was what is termed a *secondary fœtus.*
14 women died—1 in every 158½ cases.*
2168 children were born alive.
79 were born still—about 1 in every 28½ cases.

Of the Deaths.

1 was on the fourth day after craniotomy had been performed, in consequence of the fœtal head being hydrocephalic. She died from inflammation of the pelvis, and commencing sphacelus in the vagina, induced by the pressure of the head during labour.

2 died from pulmonary disease; one on the sixth day after delivery, from confirmed phthisis; the other a fortnight after delivery, from pneumonia, which commenced towards the close of gestation, was checked for a time, but returned with increased violence after the birth of the child. This woman had a narrow pelvis; she had had fourteen children: on one occasion craniotomy had been performed; premature labour had been induced five times,—four times by a gentleman now retired from practice, the last by my father and myself in February, 1829. Her labours had all been difficult, except when brought on prematurely. On this occasion premature labour came on spontaneously, a few days before the time when I had determined to induce it artificially.

1 from a sudden eruption of blood on the ninth day after delivery, under a placentar presentation. Every dangerous symptom had ceased, she appeared recovering favourably; I had discontinued my attendance, when I was summoned hastily, and on my arrival at the house I found her dead.

1 on the sixth day after delivery of twins. I did not see the patient till the day before she died; I was then told that the labour had been natural and easy, but a draining of blood had continued ever since: she was evidently sinking from the loss. On examining the body after death, I found a portion of the placenta attached to the uterus, nearly the size of the palm of the hand. Improper attempts to remove the placenta had evidently been made by the midwife.

1 from a ruptured uterus; it was her fourth child; all the children had been born naturally, though dead; her labours had all been lingering, owing to diminished space in the conjugate diameter of the brim of the pelvis. When I saw her first, the membranes had been ruptured fourteen hours; I left her for two hours, and during my absence the uterus ruptured itself. I immediately turned the child, but was obliged to perforate the head before I could extract it. The rent was transverse in the anterior part of the cervix uteri, and sufficiently large to admit the hand readily into the cavity of the abdomen, into which the whole of the child, except the head, had escaped. She appeared to rally for a few hours; but afterwards gradually sunk, and died on the fourth day after delivery.

1 on the fourth day after delivery by the long forceps: she was much exhausted when the operation was performed, and continued sinking till she died. Her pelvis was considerably smaller at the brim in its conjugate diameter than natural. This was her third child: under all her labours, I delivered her by the same instrument.

2 from peritonitis; one on the fourth day, the other a fortnight after delivery. Both labours were natural and easy.

4 from the effects of adherent placentæ. One on the tenth day after delivery, of irritative fever: it was a first child; the labour had been very lingering; the placenta was firmly adherent throughout its whole extent, and removed with great difficulty. The whole was brought away, and there was a very small quantity of blood lost.—One was on the ninth day: on the fourth day after delivery she was recovering well; she was afterwards suddenly taken ill, a neighbouring practitioner was sent for, and I did not hear of her again till I was informed of her death.—One on the sixteenth day: she

sunk under constant and violent shivering fits, which continued from the third day after delivery till her death. There had been comparatively a small quantity of blood lost, but she was very much depressed by it.—The other on the third day, with symptoms exactly such as would be produced by an over-dose of opium. I had ordered her ten minims of laudanum every four hours, and as she had only taken three doses, I at first suspected that the medicine had not been properly prepared. On comparing the remainder, however, with another quantity made according to the same prescription, I could not detect the slightest difference in colour, taste, or smell. Her death may be accounted for in two ways; either the system was peculiarly susceptible of the influence of opium, or, what is more likely, the stupor proceeded from the excessive loss of blood she had sustained; as we sometimes see convulsions the consequence of violent hæmorrhage. The comatose state continued for 15 or 16 hours, and it was with the greatest difficulty she could be roused even to put out her tongue. I never before met with a similar case.

1 of irritative fever, 17 days after the expulsion of putrid twins, at six months; one was expelled two days before the other. There was a slight hæmorrhage after the birth of the second. I removed the placentæ, which were both partly in the vagina, partly retained in utero by the closing of the os uteri upon them. This constriction, and the smallness of the uterine cavity, prevented the introduction of my hand, but both placentæ were extracted whole.

Of the Stillborn Children.

25 were premature.
9 were putrid at full time, or nearly so.
9 were breech presentations at full time, or nearly so.
4 were shoulder presentations.
1 was under a placentar presentation.
1 was after the mother had suffered from accidental hæmorrhage before delivery.
3 were after the mothers had suffered from puerperal convulsions.
2 were delivered by the long forceps.
1 was hydrocephalic; delivered by craniotomy.
2 were after the induction of premature labour.
1 was under a ruptured uterus.
1 was acephalous.
With 6 the funis prolapsed by the side of the head, and could not be returned. In one of these cases the vagina was much constricted from sloughing after a former lingering labour; I was compelled to divide the stricture by a scalpel.
14 were at full time, head presenting; not putrid, nor delivered by art.

The number of deaths last year was greater than the average proportion in this charity; this may, perhaps, be accounted for in some degree by the prevalence of a puerperal epidemic of a very fatal character, which raged during the commencement of the year in the eastern and north-eastern extremities and suburbs of the town. For, although not one of the patients of the Maternity Charity died of that specific disease, still during its continuance they appeared to suffer more than usual from accidental occurrences, which at other times would probably pass without producing any serious consequences. I particularly remarked that they did not recover so readily after hæmorrhage as I am accustomed to see them, and I suspect that the same condition of the atmosphere which favoured the spreading of the epidemic—without exactly inducing the prevalent disease—predisposed all puerperal women to various unhealthy actions on the application of any exciting cause.—*Lond. Med. Gaz. March,* 1851.

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59. *Effects of Manufactures upon Health and Longevity.*—In an interesting

work on the influence of trades, professions, &c. upon health and longevity, by C. Turner Thackarah, Esq. we find the following statement, in relation to the influence of manufactures upon the mortality of Leeds, a manufacturing town. For the sake of comparison, Mr. T. takes at random Ripon, a town destitute of manufactures, and Pickering Lythe, a merely agricultural district. "In 1821, the population of the town and borough of Leeds was 83,796, and the burials were 1516, or one death in 55 persons. In the liberty of Ripon at the same time, the population was 12,131, and the burials were 180, or one death in 67½. But Ripon being subject in a degree at least to the evils of a town, we are required to compare the mortality at Leeds with that of an agricultural district, where the people and their habitations are not crowded. Pickering Lythe returned in 1821 a population of 15,232, and the number of burials 205; one death consequently in 74 persons. Taking then the mortality at Pickering Lythe as the natural one, there was an excess of 321 deaths in the borough of Leeds during the year 1821. And allowing for the increase of population since that period, we may fairly say that at least 450 persons die annually in the borough of Leeds, from the injurious effects of manufactures, the crowded state of population, and the consequent bad habits of life!"

CHEMISTRY.

60. *Mode of obtaining the active principle of the Elaterium.*—The great uncertainty of the elaterium as a purgative, propably dependent upon the varying qualities of the drug, renders it of some interest that its active principle should be obtained, so that the uncertainty in the administration of the article should be removed. John D. Morries, Esq. has attained the active principle which he has named *Elaterine*, in the following manner.

Elaterium is to be digested for twenty-four hours in distilled water at a temperature of about 200° F. and filtered. The residual matter is to be acted upon by alcohol, s. g. 825; this tincture is to be evaporated to the consistence of thin oil, and while still warm, to be thrown into boiling distilled water; immediately a copious white crystalline precipitate forms, and increases in quantity as the liquor cools. This precipitate is the elaterine, and which is to be separated by decantation and filtration, and repeatedly washed with distilled water. In this state it is sufficiently pure for medical use; if it be required perfectly pure, it is only necessary to repeat the solution in alcohol and precipitation.

The elaterine is a white crystalline substance, of an extremely bitter and rather styptic taste, insoluble in water and the alkalies, soluble in alcohol, ether, and in hot olive oil, sparingly soluble in dilute acids. When in a state of purity, it forms microscopic rhombic prisms, striated on the sides, possessed of considerable lustre, and of a silky appearance when in mass. It is decomposed by the strong acids, forming with nitric a transparent yellowish gummy looking-mass, and with sulphuric, a solution of a deep blood-red colour. It is fusible at a temperature a little above that of boiling water, and at a higher temperature is dissipated in thick, whitish, pungent vapour, having rather an ammoniacal odour.

• In the department of materia medica will be found an account of the medical effects of this article.—*Edinburg Medical and Surgical Journal, April,* 1831.

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61. *Process for Economically preparing the Muriate of Morphia.*—Dr. William Gregory, of Edinburgh, recommends the following process for the preparation of the muriate of morphia, without the use of alcohol, and by which this preparation of opium may be made cheaper than any other now in use.

"Opium is cut in small pieces, and completely exhausted by cold water, or water at 90° F. The aqueous infusion is concentrated till it occupies a small bulk, and precipitated by a slight excess of ammonia. The precipitate is col-

lected on a filter, washed moderately with cold water, and dried at a temperature below 212°. When dry, it is reduced to powder, and rubbed up with cold water. Diluted muriatic acid is now added by degrees. The first portions are speedily neutralized, but fresh acid is added until a slight but permanent excess is present. This dissolves both the morphia and narcotine, forming a dark-brown solution, which must be filtered to separate it from some very dark matter which is left undissolved. The filtered solution is now evaporated to nearly the consistence of syrup, and on cooling forms a brown mass of crystals moistened with a very dark liquid. The whole mass is now subjected to strong pressure between folds of bibulous paper, which absorbs the liquid containing the muriate of narcotine and colouring matter, and leaves the muriate of morphia tolerably pure, although still of a brownish colour. A second solution, crystallization, and expression, yields the salt nearly white and free from narcotine. By a third crystallization the muriate of morphia may be obtained in radiated bunches of silky crystals of snowy whiteness. These crystals, when dried by a moderate heat, become quite opaque. They are soluble to almost any extent in boiling water. Their solution has a very bitter taste, and yields, when supersaturated by ammonia, a highly crystalline precipitate of morphia. A similarly pure solution of narcotine in muriatic acid gives a curdy precipitate not at all crystalline."

The quantity of muriate of morphine obtained from opium by the above process, varies according to the quality of the drug. Dr. G. has however got as much as 17.5 per cent. but the quantity usually procured is about 10 per cent.

Dr. Christison and several other practitioners, who have used the muriate of morphia, consider its powers to be equal to that of any other of the preparations of morphia. It is given in solution, five grains of the salt dissolved in one ounce of warm water, of which twenty five drops, equal to one-fourth of a grain of the salt, is the medium dose.—*Edinburgh Medical and Surgical Journal, April,* 1831.

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62. *Analysis of Secale Cornutum.*—Mr. R. Battley, of London, has recently analysed both the sound and diseased rye, and his experiments show that starch abounds in the former, but that its presence is scarcely discoverable in the latter; that the unsound rye contains a large proportion of resinous matter, the sound very little, and that the unsound contains a greasy substance, resembling animal matter in taste and smell, not found in the sound rye; and finally, that the unsound rye contains a free acid, none being found in the sound, and that muriatic acid was present. The following was the mode of analysis adopted by him.

1st. *Sound rye perfectly dry and subpulverised.*—No. I. 1000 grains were macerated in cold distilled water: the water immediately became milky, and after some hours yielded of starchy matter 320 grs. The starch was separated, and the supernatant fluid, which was free from acid, having been distilled in a close vessel, the extract weighed 334 grs.

This extract had a peculiar gelatinous quality, and a *slightly* acrid and bitter taste: colour brownish-yellow. The water brought over had the smell of bread, but no other sensible property was detected by the reagents used.

The residuum, when dried, weighed 256 grs. making together, with the two quantities above mentioned, 910 grs. the remaining 90 grs. were lost, nor have I been able, by the utmost vigilance of attention, to account for this, or for a similar loss in every experiment to which the rye, whether in a sound or unsound state, has been submitted.

From the residuum of 256 grs. about 5 grs. of resinous matter were obtained by maceration in alcohol: the alcohol having been slightly tinged with yellow.

No. II.—1000 grains, macerated in proof spirit, yielded of starchy matter 494 grs. and of extract by distillation, 213 grs. the residuum was 250 grs. Loss, 43 grs.

No. III.—1000 grains were macerated in three pints of alcohol, and yielded of extract, of a yellowish appearance, and of a viscid and gelatinous quality, 26 grs.

The spirit was subjected, after distillation, to various reagents, but without the detection of any extraneous matter.

The residuum weighed 960 grs. Loss, 14 grs.

The 960 grs. were macerated in three pints of distilled water, which became slightly milky, *but no deposit of starch took place*. The water was changed so long as the milky appearance continued, but still without any deposit; although, when the tincture of iodine was added, the presence of starch was indicated by a purple colour. The extract obtained by these repeated macerations weighed 160 grs. The residuum weighed 630 grs. Loss, 170 grs.

2d. *Diseased rye also perfectly dry and subpulverized.*—No. I. 1000 grains of the rye were macerated in cold distilled water; the water immediately became mucilaginous, was of a dull cloudy appearance, and a free acid was detected by litmus paper. After thirty-six hours maceration the clear decanted liquor was gently distilled, leaving of extract 178 grs. possessing a sourish animal smell, very peculiar and slightly acrid. The residual matter, when quite dry, weighed 786 grs. Having been lost in the operation 36 grs.

The water thus distilled, when examined by tests, was found to be free from acid. The 786 grains were digested in spirit of wine: the spirit became of a deep purplish-red, and having been gently distilled, left of extract 24 grs. The residual matter, when dried, weighed 748 grs. Loss, 14 grs.

This extract possessed a sourish animal smell, and was slightly acrid. The distilled spirit was free from acidity, and from all sensible properties.

The residuum of 748 grains having been again macerated in water, no sensible property of any kind could be discovered.

No. II. 1000 grains were macerated in proof spirit for thirty-six hours. The spirit became of a deep amber-colour, was somewhat acrid, but free from smell, and the presence of acid was detected. Being distilled off, there remained of deliquescent extract, of a sourish animal smell, 122 grs.

The distilled spirit did not possess any sensible property. The residuum, when dried, weighed 820 grs. having imparted to the spirit during maceration 180 grs. of which were obtained in extract, as above-mentioned, only 122 grs Loss, 58 grs.

The 820 grains were macerated in distilled water for several hours, imparting to it a dull, cloudy appearance, and showing an acid when tried by the litmus paper. When re-dried, weight 795 grs. having imparted to the water 25 grs. of which 11 grs. only were obtained in extract. Loss, 14 grs.

No. III. 1000 grains were macerated for 36 hours in spirit of wine. The liquid contained acid, and became of a deep amber-colour. It was carefully distilled, leaving of extract, 73 grs. and of greasy matter, of an animal taste and smell, 39 grs. The residuum weighed 810 grs. Loss, 48 grs. The residuum, re-dried, was macerated in distilled water, from 30 to 40 hours. The water was of a dull, cloudy appearance, and an acid was detected by the litmus paper. It was slightly tinged with yellow, and when distilled left of extract, 26 grs. the taste of which was slightly acrid and bitter. The remainder, when dried, weighed 748 grs. having imparted to the water, 92 grs. Loss, 66 grs.

No. IV. 1000 grains were macerated in a pint of distilled water thrice successively. The water of the first and second macerations was acid, which property was evolved immediately upon the application of the water. That of the third maceration was free, or nearly so, from acid. The three fluids were mixed and filtered, and nitrate of silver was added so long as precipitation ensued. The precipitate was collected and dried, and exposed to boiling nitric acid so long as any colour was imparted to it. The remaining matter was of a dull white. The dull white matter was washed with *pure* distilled water so long as acid was imparted to it. The collected mass, when dried, weighed from 7 to 8 grains, which were submitted to the action of the blowpipe, and silver to the amount of 4 grains, was revived. To ascertain the accuracy of the results, the experiment was repeated on a larger scale. One pound of the entire *secale cornutum* was placed under circumstances as described in operating upon 1000

grains, with the additional precaution that the precipitate obtained was dissolved in pure ammonia, filtered, and nitric acid in excess:—a white precipitate instantly ensued. The precipitate was washed in distilled water, and dried. In some hours the matter became of a bluish, or pale slate colour. The flame of the blowpipe was used, and the silver revived, proving the acid in *secale cornutum* to be muriatic.—*London Medical Gazette, Feb.* 1831.

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63. *Existence of Copper in Vegetables and Blood.*—M. Sarzeau has confirmed the discovery of Meissner, that copper exists in vegetables, and he has obtained the following results:

	Milligrammes of Copper.
1 Kilogramme of grey quinquine contains,	5
Madder,	5
Coffee, green Martinique,	8
Coffee, Bourbon,	8
Common,	8
Wheat,	4.7
Farina,	0.7
Fæcula of potatoes,	0.0
Blood,	1.1

M. Sarzeau has found that one milligrame of copper may be detected by the cyano-ferruret of potassium in one kilogramme of water.—*Journal de Pharmacie*, xvi. 505.

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64. *Composition of Kermes Mineral.*—The composition of Kermes mineral, as determined by Berzelius and Rose, in accordance with Phillips, has lately been called in question by the French chemists. According to the former, it is exactly the same substance as the common native sulphuret of antimony. Robiquet, Buchner, and Henry, Jr. who found it to contain oxide of antimony, have been joined by Gay-Lussac, who says, (*An. de Chim. xlii. p.* 87,) that when treated with hydrogen gas, it gives off water, and that it is in fact a compound of 1 atom oxide of antimony + 2 sulphuret of antimony. Rose has therefore repeated his experiments, (*Poggendorf's Annalen, xvii.* 324,) with his former results. He prepared his kermes by boiling carbonate of soda on the common sulphuret of antimony, filtering, setting it aside to cool, filtering it again in half an hour to collect the precipitate, drying it well on bibulous paper, and afterwards by a gentle heat till it ceased to lose weight. He found the kermes thus prepared to give no water in a current of hydrogen gas, but to leave 72.71 per cent. of metallic antimony. His former analysis gave 72.32 per cent. and Berzelius found in the common sulphuret 72.77 per cent. The residual liquid, according to Rose, after some hours, becomes troubled, and deposits a white sediment, being oxide of antimony combined with soda. If the kermes be not filtered, soon after its deposition, it will thus be contaminated both with oxide of antimony and with alkali, and this is probably the source of the oxide found by the French chemists. Since no carbonic acid is evolved during the preparation of the kermes by this process, all that takes place is a mere solution of the sulphuret of antimony in the carbonated alkalies.—*Edinburgh Journal of Science.*

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65. *Salicine from the Athenian Poplar.*—M. Braconnot having employed the bark of the populus tremula with success in fevers of various kinds, satisfied himself by some experiments that it contained, 1, salicine; 2, corticine; 3, populine; 4, benzoic acid or its elements; 5, a gummy matter; 6, a principle soluble in alcohol, which reduced the salts of gold, silver, and mercury; 7, tartrates of lime and of potassa.

The discovery of salicine in the bark of the aspen induced M. Braconnot to seek for it in other vegetables. His researches have proved it to exist in the

populus alba, the populus græca, (Athenian poplar,) in the salix fissa, amygdala, and helix; and he has remarked that in certain species of willow both the salicine and tannin disappear entirely and give place to a saccharine [illegible].

M. Braconnot's process for obtaining the salicine is as follows. [illegible] a decoction of the bark of the aspen, and pours into it subacetate [illegible] colourless liquid thus obtained is deprived of its excess of lead [illegible] acid. A little washed animal charcoal is then added, and the [illegible]ing filtered is put aside, and deposits the crystallized salicine [illegible] *Journ. de Chim. Med. Jan.* 1831.

MISCELLANEOUS.

66. *Paracentesis Cranii.*—It is stated in our respected [illegible] *Medical and Surgical Journal*, that Dr. Con[illegible] has perfor[illegible] in seven cases of chronic hydrocephalus, in [illegible] of which [illegible] been effected. It is due to the profession that the details of these [illegible] be given to them.

67. *Epidemic Cholera.*—Our foreign journals are filled with memoirs and speculations respecting this disease, which appears to be the engrossing topic among the medical men of Europe. As usual, the utmost diversity of sentiment prevails as to its character, pathology and treatment, and nothing appears as yet decided on these points, of sufficient importance and novelty to lay before our readers.

There is nothing very remarkable in the appearance of cholera as an epidemic. It prevailed in London in 1669 and 1676, in Switzerland in 1696; in Germany in 1817; in Paris in 1750; and in the year 1600 no part of Europe was exempt from its ravages. In 1817 the present epidemic made its appearance in Asia, where it prevailed during eight years, and is said to [illegible] destroyed upwards of six millions of human beings. At the latest dates [illegible] Russia, and had even extended as far as Warsaw in Poland.

AMERICAN INTELLIGENCE

[illegible] *of that strip of land south of Philadelphia, called the "Neck"*— [illegible] *responsibility for the facts* must necessarily *rest* with the *authors* of [illegible] is generally impossible for an editor to ascertain their accuracy [illegible] yet as regards the statement made at page 320 of this number [illegible] of the "Neck," were we to allow it to pass unnoticed, [illegible] propriety, be held in a degree responsible, since our po- [illegible] familiar with the subject, or at least places the [illegible] truth within our reach.

[illegible] that we should state that the observations referred [illegible] with limitations bilious and intermitting fevers being still [illegible] district; this must not, however, be received as indi- [illegible] utility of cultivation in lessening the production of malaria [illegible] this district is *still unreclaimed*, and on the whole it is perhaps less [illegible] than thirty years ago, a portion of this improvement in healthiness must, however, be ascribed to greater comforts, which the increased wealth of the inhabitants places at their command.

The following letter with which we have been favoured by Dr. D. F. Condie, who has for several years resided in the neighbourhood, and is familiar with the history of the health of the district, is confirmatory of our own impressions on the subject

DEAR SIR,

In your note of the 11th inst. you request from me a statement of my experience as to the general health of the inhabitants of that tract of land denominated the "Neck," extending from the southern suburbs of the City of Philadelphia to the junction of the two rivers

[illegible] the healthiness of this portion of our county has no doubt been [illegible] within the last twenty-five years, as well from the increase [illegible] of its inhabitants, as from the removal of various causes of [illegible] and improved methods of cultivation, yet it is very far from [illegible] residence. Intermittent and remittent fevers prevail there ex- [illegible] year, particularly along the shores of the two rivers, and in the [illegible] extensive marsh meadows which constitute so large a [illegible] During the autumns of 1822, 23, and 24, few indi- [illegible] escaped an attack of one or other of these dis- [illegible] consequence was very great. Generally speaking, [illegible] the inhabitants is much less indicative of health than [illegible]

Yours, &c.

D. FRANCIS CONDIE

[illegible] Southwark, July 14, 18[illegible]

[illegible]

[illegible] *Epigastric Region.* By CHARLES HALL [illegible] —On the 15th of September, 1830, I was called [illegible] aged about thirty, possessed of a good constitution, [illegible] health, by occupation a farmer and a hard labourer. [illegible] suffering under a species of cholic, had con- siderable [illegible] of the abdominal region. With this had complained [illegible] most of this time had kept about his work [illegible] much depressed, yet somewhat hurried [illegible] coat; skin and extremities below the natural temperature [illegible] these symptoms as the result of obstruction of the

portal system, and congestion of the secretory organs, I at first took from the arm a moderate bleeding, although it was not specially indicated; administered a liberal dose of calomel and jalap, and applied an epispastic to the scrobiculus cordis. Under this treatment, the case was left for the night. [illegible] ans I learned had the desired effect, and the patient was left several day[illegible] further medical assistance. Being called again, the 17th, I foun[illegible] general enlargement of the abdomen, a local tumour, circul[illegible] four inches broad, situated beneath the skin and adipose sub[illegible] gastric region. It was not acutely sensible to the touch, thoug[illegible] stony hardness. Its position was nearly equidistant from the false [illegible] cartilage, and the navel. It was quite convex, though the ski[illegible] substance appeared not to partake of the disease. I [illegible] tumour the first time I saw the case, but was now informed by [illegible] first experienced in place of this enlargement, a sli[illegible] during the season past, which he could then cover, [illegible] point of a finger. This soon became tumid, and g[illegible] form. This swelling seemed to be fixed in [illegible] position, t[illegible] be well-defined in its outer margin. It was evidently either [illegible] recti muscles or attached to the peritoneum, for it seemed not to be [illegible] connected with the abdominal viscera. This was apparent from the abs[illegible] nausea, distress of the stomach, constipation of the bowels, or general febrile excitement; yet from the extreme lassitude that prevailed, as well as *some* degree of tardiness of the intestines, it was evident that the functions of life were considerably influenced by this enlargement. The digestive function seemed in a measure suspended, though the appetite was rather voracious.

There was no change from health in the colour, temperature, or sens[illegible] of the skin immediately over the tumour; yet the swelling was attende[illegible] times, at irregular intervals, with darting obtuse pains; these were mostly [illegible] however, in the night, and although there were no paroxysms of fever attending the case, yet a considerable arterial impulse was given to the tumour. Indeed this was so forcible as sometimes to direct my attention to ascertain th[illegible] the impulse did not exist in the tumour itself; of this I became [illegible] however, and was convinced that this reaction arose from the pres[illegible] upon the subjacent vital organs.

In the further treatment of this disorder, I resorted pri[illegible] six or eight days, to scarifying and cupping as local appli[illegible] ministered repeated doses of calomel, to move the bowels a[illegible] ch[illegible] the functions of assimilation. In this short time the tumour [illegible] and the energies of the general system, in the inve[illegible] the belief now that the disease was rapidly giving [illegible] th[illegible] the cups and calomel, leaving the patient for a time [illegible] cathartics and volatile liniment, and some milder [illegible] soon, however, apprised that the former symptom[illegible] most aggravated form, so that when I saw the patient [illegible] acquired more than its former size, with an evident i[illegible] pain; and the general circulation was again labouring [illegible] sumed the cups and calomel and applied a flaxseed [illegible] to [illegible] though there were no apparent signs of approaching [illegible] ratio[illegible]

The next day I called in my neighbour Dr. Ch[illegible] We [illegible] greatly changed for the better, the treatment [illegible] same amendment as before. Dr. Chandler gave [illegible] tumour would eventually suppurate, the[illegible]

This course of practice was pursued until [illegible] disease, though it had lessened in bulk with [illegible] general health, seemed now nearly at a [illegible] in[illegible] fluenced by the agents made use of, I re[illegible] cordingly ten drops of saturated tincture [illegible] morning, and the same applied locally [illegible]

[illegible]nifest difference in the case the tumour rapidly declined, and the general [illegible] inversely returned, so that by the [illegible] of November following, the [illegible] was wholly gone, since which time the patient has been in perfect health [illegible] and has resumed his accustomed [illegible]

[illegible]haps it may be worthy of remark [illegible] the tumour [illegible] one of the stony hardness [illegible] figure [illegible] above its [illegible] to be no longer [illegible] ed in the muscles, [illegible] from a rigid state of [illegible] of this case is the additional [illegible] of the iodine over other agents [illegible] indeed surprising accounts of [illegible] of goitre and various other morbid [illegible] a more striking development of its [illegible] Although the mercurial treatment [illegible] the unyielding disposition [illegible] nevertheless that these alone were [illegible] of this morbid growth [illegible] use of the iodine, [illegible] nausea, diarrhoea, [illegible] three or four days. [illegible] of the tumour returned, [illegible] ing, although the other [illegible] in the assurance that [illegible] ly by the effects of the [illegible] change.

Case of Injury of [illegible] By W[illegible] [illegible]enn.—September 27, 18[illegible] [illegible] even years [illegible] had [illegible] the height of about [illegible] an extensive wound [illegible] which I could [illegible] the fracture was [illegible] the longitudinal sinus, [illegible] cation of the [illegible] supercilia, a portion [illegible] against those around it: [illegible] could be discovered, [illegible] bone. [illegible] haemorrhage had [illegible] of the [illegible] assistance t[illegible] is perfectly rational [illegible]

[illegible] to me to request [illegible] the want of proper instruments [illegible] an operation [illegible] friends, Drs. [illegible] we [illegible]

[illegible] the proper construction, we examined [illegible] that it would be most expedient [illegible] above and pressing upon the [illegible] extensive enough in this direction to accomplish that [illegible] as low down as the edge of the orbit [illegible] loose bone, so as to be enabled to lay hold [illegible] which I detached it from the appendage [illegible] side and the [illegible] ter on the other, principally with [illegible]

... of the scalpel. This piece of bone measures from the ... backwards along the ... process one inch and a ... one inch ... of the orbitar ... forehead ... inwards as the ... ture to... depression ... where ...

... portion of ... the lodgment of the ... operation, we determine... to enable us to elevate ... proceeded, by making an ... tion, and dissecting it up so as to ex... application of the trephine.... onsiderable space of time, but ... accomplished, and the piece of bone ... he slightest injury to the dura ... the depressed portion of bone, but ... a level with the un... importance, as there ... uncovered by skull, ... ly depressed piece of ... were now removed, after ... of the scalp together ... with a pledget of lint. ... days, after which ... with a little basilicon. ... was kept on spare diet ... with a little of ol. ricini on...

... promising appearance ... during the whole ... were restored ... the operation, ... inflamma...

... might have been ... beaten ... and ... ges, ... of the de... tached ... of the ... eye, no ... sight, ... the power ... impaired ... though ... the lachrym... are secrete...

... be ... to ... propriety ... immense power which ... several parts from ... effects ... without ... them attempt ... and di...

This present situation of this boy's eye ... relation to the ... we have ... posed between ... except the membranes of ... ranes and mus... cles ... unless we enumerate the ... lies in the ex... ternal ... part of the orbit, in a ... is now formed ... by the approximation of the ... forming an angle just before they meet.

WHITES.

[illegible]ES.	Under 3 y's of age	3 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	TOTAL	January	February	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
[illegible] over	21	21	16	34	61	24	12	5	5	1	0	200	21	12	11	11	22	11	16	16	29	30	13	1[illegible]
[illegible]	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	[illegible]	0	1	0	1
[illegible]cerebritis	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	[illegible]
[illegible] Do.	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	[illegible]
[illegible]	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	[illegible]
[illegible]ced	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
[illegible]matic	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
[illegible] Disease of	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	[illegible]
[illegible]	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	[illegible]
[illegible]gh	3	1	0	0	0	0	0	0	0	0	0	[illegible]	0	0	0	1	0	1	0	0	1	0	[illegible]	1
[illegible] Bowels	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	1	0	1	0	0	0	1	
[illegible] Stomach	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	
[illegible]ence	0	0	0	2	6	2	2	0	0	0	0	12	4	0	0	0	1	0	0	1	3	[illegible]	0	
[illegible]	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	[illegible]
[illegible]er Complaint	0	0	0	0	1	2	2	0	0	0	0	5	0	0	0	0	0	0	0	1	2	2	0	
[illegible]ck Jaw	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	
[illegible]nia	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
[illegible]nia a potu	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	1
[illegible]smus	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
[illegible]sles, effects of	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
[illegible]scarriage	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
[illegible]ous Affection	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	
[illegible] known	2	3	3	7	3	1	4	1	1	1	0	2[illegible]	0	2	2	1	5	[illegible]	[illegible]	1	1	[illegible]	[illegible]	[illegible]
[illegible]ses, change of	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
[illegible] Age	0	0	0	0	0	0	1	2	8	1	1	16	1	0	2	0	0	1	0	1	3	3	1	
[illegible]lysis	0	0	0	0	0	[illegible]	0	1	0	1	0	[illegible]	0	0	0	1	0	0	1	0	0	0	0	
[illegible]	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	[illegible]	0	0	
[illegible]	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	
[illegible]	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	1	
[illegible]	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	
[illegible]ll-pox	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	
[illegible]ening of brain	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	
[illegible] Throat	2	2	0	0	0	0	0	0	0	0	0	4	0	2	0	1	0	0	0	0	0	0	[illegible]	[illegible]
[illegible]	1	1	1	0	1	0	0	0	0	0	0	4	0	0	1	0	0	0	1	0	0	0	0	
[illegible]	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
[illegible] of the [illegible]	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	
[illegible]	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
[illegible]	9	0	0	0	0	0	0	0	0	0	0	[illegible]	1	0	0	1	0	2	1	0	2	1	1	
[illegible]	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
[illegible] Throat	0	0	0	0	1	0	1	0	0	0	0	2	0	0	0	0	0	0	[illegible]	0	1	0	2	
[illegible]	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	[illegible]	0	0	0	0	0	[illegible]	
TOTAL	49	32	20	52	76	39	27	11	14	8	1	329	28	18	18	20	24	25	30	20	11	43	29	[illegible]

[illegible]LES, 209—FEMALES, 120

[illegible]tives of the City or State, [illegible]—Natives of different parts of the U. S. 87—Foreigners, 56

Residents of the City, 268—Non-residents, 61

Proportion of deaths, (excluding the non-residents,) to the population of the city, accor[illegible]ng to the last census, (1830,) one out of every 47[illegible].

Proportion of deaths among the Males, (excluding the non-residents, of whom there were [illegible]) one out of every 41½.

[illegible]portion of deaths among the Females, (excluding the non-residents, of whom the[illegible] [illegible]re [illegible],) one out of every 56.

BLACKS AND COLOURED.

DISEASES.	Under 3 yr's of age.	3 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	TOTAL	January	February	March	April	May	June	July	August	September	October	November	December
Abscess - - -	1	0	1	0	1	0	0	0	0	0	0	3	1	0	1	0	0	0	0	0	0	0	0	1
Accident - - -	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	0
Apoplexy - - -	0	0	0	0	0	0	2	2	3	1	0	8	0	0	0	0	1	1	1	3	0	0	0	2
Asthma - - -	0	0	1	0	0	0	0	0	1	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0
Bowel complaint -	13	0	0	0	0	0	0	1	0	0	0	14	0	0	1	2	1	3	4	1	1	1	0	0
Brain, affection of	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Burn, effects of a	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Cancer - - - -	0	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	0	1	0
Chicken Pox - -	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Child Bed - - -	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0	0
Cholera Infantum	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Cholera Morbus -	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0
Cold - - - - -	3	0	0	0	0	0	0	0	0	0	0	3	0	0	2	1	0	0	0	0	0	0	0	0
Colic - - - -	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Colic, Bilious - -	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Consumption - -	4	4	6	15	13	9	3	0	2	1	0	57	2	4	5	2	6	4	7	10	6	5	2	4
Convulsions - -	6	1	0	0	1	0	0	0	0	0	0	8	1	1	0	0	4	1	1	0	0	0	0	0
Cramp - - - -	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Cramp in Stomach	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	0	0	1	0	0
Croup - - - -	6	1	0	0	0	0	0	0	0	0	0	7	2	0	1	0	1	1	0	0	0	1	1	0
Debility - - - -	6	0	1	1	1	0	1	0	1	0	0	11	2	0	2	0	0	1	1	0	2	1	0	2
Decline - - - -	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Diarrhœa - - -	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Dilatation of Heart	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Dropsy - - - -	4	4	2	1	10	6	4	3	2	1	0	38	1	4	2	1	5	6	5	3	6	2	2	1
Dropsy of Chest -	0	3	0	0	0	2	4	0	2	0	0	11	1	2	0	0	6	0	2	0	0	0	0	0
Dropsy of Head -	2	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	2	0	1	0	0	0
Dropsy of Heart -	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Dysentery - - -	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Epilepsy - - -	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Fever - - - -	6	1	2	0	0	0	1	0	0	0	0	10	1	0	1	0	1	0	0	0	1	5	0	1
Fever, Bilious -	0	1	1	2	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	1	3	1	0	0
Fever, Catarrhal -	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Fever, Country -	0	0	1	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0	1	0	0	0
Fever, Infantile -	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Fever, Inflammatory	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Fever, Intermittent	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
Fever, Scarlet -	1	2	1	0	1	0	0	0	0	0	0	5	0	0	0	0	0	1	2	1	1	0	0	0
Fever, Stranger's	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Fever, Typhus -	0	0	2	1	0	2	0	0	0	0	0	5	0	0	0	0	1	2	0	0	1	0	0	1
Fever, Worm -	5	5	0	0	0	0	0	0	0	0	0	10	1	2	1	0	1	1	2	0	0	0	1	1
Fits - - - - -	3	0	0	1	0	0	1	1	0	0	0	6	0	1	0	0	1	0	1	1	1	1	0	0
Found dead - -	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Gravel - - - -	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Heart, disease of -	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Hepatitis - - -	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Hooping-cough -	9	2	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	1	3	2	3	1	1	0
Hydrophobia - -	0	0	2	0	0	0	0	0	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0
Hypertrophy of H't	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Inflamm. of Bowels	1	0	0	2	0	2	0	0	0	0	0	5	1	2	0	0	0	0	0	1	0	0	1	0
Inflamm. of Lungs	2	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	1	0	0	1	0	0	1	0
Inflamm. of Stomach	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Insanity - - - -	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Carried over -	76	30	24	28	33	23	21	12	14	4	0	266	16	20	20	7	36	27	37	26	29	21	12	15

BLACKS AND COLOURED.

DISEASES.	Under 3 yr's of age.	3 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	TOTAL.	January	February	March	April	May	June	July	August	September	October	November	December
Brought over	76	30	24	28	33	23	21	12	14	4	0	266	16	20	20	7	36	27	27	26	29	21	12	15
Intemperance	0	0	0	2	1	1	2	0	0	0	0	6	1	0	0	0	1	2	0	0	0	1	1	0
Liver complaint	0	0	1	1	0	1	1	0	1	0	0	5	2	0	0	0	0	0	0	1	0	0	2	0
Lock Jaw	11	0	0	0	0	0	0	0	0	0	0	11	1	0	0	0	1	1	1	2	0	2	3	0
Mania	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Marasmus	2	0	1	1	1	0	0	0	0	0	0	5	0	0	0	0	1	0	0	3	0	0	0	1
Measles	3	0	2	0	0	0	0	0	1	0	0	6	3	0	1	0	0	1	0	1	0	0	0	0
Measles, effect of	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0
Measles and Thrush	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Mortification, dry	0	0	0	0	0	0	1	0	0	1	0	2	0	1	0	0	0	1	0	0	0	0	0	0
Do. from fracture	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Not known	11	1	2	2	3	1	1	1	0	1	0	23	1	5	2	1	3	6	0	0	2	1	2	0
Old Age	0	0	0	0	0	0	0	4	7	6	5	26	2	3	3	1	0	2	3	1	5	3	2	1
Pains	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Paralysis	0	0	0	0	0	1	0	2	0	0	0	2	1	1	0	0	0	0	0	0	1	0	0	0
Pleurisy	0	0	0	1	2	0	3	0	0	1	0	7	1	1	1	2	0	0	0	0	0	0	1	1
Pleurisy, bilious	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Pneumonia, bilious	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Rheumatism	0	0	0	0	0	0	1	1	0	0	0	2	0	1	0	0	0	0	0	0	0	1	0	0
Scrofula	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0
Small Pox	2	2	2	4	2	1	1	0	0	0	0	14	0	0	0	0	0	0	1	0	0	3	5	5
Smothered accid'y	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Sore Throat	2	0	2	0	0	0	0	1	0	0	0	5	0	1	0	0	0	0	1	0	1	0	1	1
Spasm	6	1	1	1	0	0	1	1	0	1	0	12	0	0	1	2	0	1	2	2	0	1	2	1
Sudden death	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Suicide by hanging	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Teething	10	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	2	4	2	0	2	0	0	0
Tetanus	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Thrush	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Tumour	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Do. pres'g on gullet	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Varioloid	1	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0
Violence	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
Visceral obstruction	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Worms	7	2	0	0	0	0	0	0	0	0	0	9	3	0	1	0	3	0	0	0	2	0	0	0
TOTAL	135	40	37	40	47	31	34	23	23	14	5		31	37	31	17	49	47	47	38	43	34	33	[illegible]
Dropsy 1, Old age 2, between 100 and 110; Old age 2, one of 113, and one of 128 years 8 months												5—434												

MALES, 199; FEMALES, 235—434. Res. of city, 431, non-residents, 3—434. All natives of State.

Proportion of deaths, (excluding the non-residents of the city,) to the population of the city, according to the last census, (1830,) one out of every 40⅓. Proportion of deaths among the Males, (excluding the non-residents, of whom there were 3,) one out of every 38½. Proportion of deaths among the Females, one out of every 42.

Proportion of the whole number of Deaths, (excluding the 64 non-residents,) to the whole population of the City, one out of every 43¼: including the non-residents, one out of every 39⅝.

By order of the Board,

JOHN BELLINGER, M. D. *Clerk.*

Meteorological Journal kept by Henry West, Esq. near the centre of Alabama, for 1830 *and the three first months of* 1831.*

N. Lat. 32° 20′ W. Long. 87° 10′	Fahrenheit's Thermom.							Rain.									
1830.	Maximum.	Minimum.	Difference of extremes.	Warmest day.	Coldest day.	Mean range.	Monthly mean.	No. of rainy days.	Hours duration.	Amount in inches and hundredths.	The sun invisible.	Cloudless.	Fog.	Thunder.	Lightning.	Frost.	Ice.
January . . .	72	23	49	63.5	39.	24	45.7	5	12	1.80	1	5	4			17	18
February . .	79	24	55	71.3	34.2	22	53.5	9	74	8.25	1	4	1	11	11	12	11
March . . .	84	30	54	75.1	44.8	22	63.6	8	28	5.65	1	4	2	7	6	7	4
April . . .	86	34	52	75.0	52.8	27	68.	4	8	1.20			3	5	3	3	2
May	91	48	43	81.4	62.6	21	73.6	9	23	4 25			1	12	13		
June	97	53	44	87.3	67.4	20	79.3	8	31	3.15		2	2	12	9		
July	98	64	34	86.6	80.	21	83.6	11	12	4.80				25	21		
August . . .	102	64	38	89.4	77.9	23	85.4	4	4	1.40			2	14	14		
September .	98	40	58	75.8	63.	27	78.	3	3	1.20		1	2	8	7	1	
October . .	85	34	51	75.7	52.	28	67.4	1	3	1.30				7	3	5	2
November . .	82	28	54	71.3	50.7	24	61.3	7	20	4.10		1	7	7	4	8	3
December . .	75	12	63	68.7	20 5	19	50.6	9	58	14.70	2	3	5	10	7	14	13
1831.							Total	78	278	51.80	5	20	29	118	98	67	53
January . . .	74	17	57	64.1	28.6	19	43.5	12	42	7.40	4	2	1	5	4	21	22
February . .	78	18	60	64.8	29.5	24	17.5	7	62	6.75	2	2	3	3	1	18	20
March . . .	85	26	59	76.9	40.7	21	61.1	8	31	6.30				7	3	7	7

Remarks.

	1828.	1829.	1830.
Days rain	116	110	78
Duration of rain	382	404	278
Amount of rain	60.40	65.85	51.80
Fog	21	21	29
Thunder	109	108	118
Lightning	95	106	98
Frost	48	73	67
Ice	23	72	53

Progress of Vegetation.

		1827.	1828.	1829.	1830.	1831.
Peach,	in full bloom	Feb. 21	Feb. 8	Mar. 19	Mar. 2	Mar. 7
Cherokee plum	do. do.	Feb. 22	Feb. 10	Mar. 20	Mar. 2	Mar. 9
Quince	do. do.	Mar. 8		Apr. 13	Mar. 22	Apr. 5
Bird cherry, (Pr. Virginica,)	do. do.	Mar. 12	Mar. 9	Apr. 11	Mar. 22	Mar. 28
Yellow jessamin	do. do.		Jan. 8	Apr. 3	Mar. 7	Mar. 30
Wild honeysuckle	do. do.		Jan. 13	Apr. 8	Mar. 10	Mar. 31
Dogwood, (Cornus Florida,)	do. do.		Feb. 22	Apr. 10	Mar. 14	Apr. 10

* This journal should have followed the paper of Dr. Heustis, on the Topography and Climate of Alabama, in our last number, but it was not received until after that number was printed off.—*Ed.*

Barrenness succeeding the Use of Iodine.—Dr. Robert H. Rivers, of Hardeman County, Tennessee, in a letter to our esteemed collaborator, Dr. S. Jackson, of this city, communicates two cases in which barrenness followed the use of iodine. The first case was that of a lady affected with goitre, and who was married at the age of seventeen. During the first three years of her marriage she gave birth to a child annually. At the end of this period, her husband thinking that the goitre increased in size, applied to a physician, who administered iodine. Under the use of this medicine the goitre decreased, and with it the breasts also, so as almost entirely to disappear. From the time of her commencing the use of iodine to the present, a period of eight years, she has never become pregnant.

Another case, similar to the above, is also said to have occurred, in which the female became barren soon after commencing the use of iodine.

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Extirpation of the entire Parotid Gland. By Dr. Mott, of New York.—Our friend, Dr. Vaché, in a letter to us, dated July 13, states that Dr. Mott the day previously succeeded in extirpating the entire parotid. "It was," says Dr. V. "perhaps double the size of a hen's egg, and although thought to be scirrhus, proved to be melanosis, and the most beautiful and perfect specimen of the disease I have ever seen. We have had a drawing taken previous to the operation, and of the tumour after it was removed. The patient is doing as yet uncommonly well and bids fair to recover."

Thus has this eminent operator added another to the numerous laurels which already encircle his brow.

We shall publish in our next number a detailed account of this case with the drawings.

—

Case of Immobility of the Lower Jaw.—Dr. Mott has succeeded, we are informed by our valued correspondent, Dr. Vaché, in curing a case of immobility of the lower jaw of six years standing, produced by the cicatrix of an extensive slough at the angle of the mouth, the consequence of fever. Dr. Mott removed the entire cicatrix, opened the mouth, and took skin sufficient from the neck to replace with sound integuments the portion removed—thus combining the taliacotian operation with that for immobility of the jaw.

We are promised the particulars of the case for our next number.

—

Action of the Mind on the Body.—Professor J. C. Warren, in his excellent lecture on the importance of physical education, delivered before the convention of teachers and other friends of education, relates the following interesting case illustrative of the influence of the mind upon the body.

"Some time since," says Dr. W. "a female presented herself to me, with a tumour, or swelling of the submaxillary gland of the neck, which had become what is commonly called a wen. It was about the size of an egg, had lasted two years, and was so very hard, that I considered any attempt to dissipate it by medicine to be vain, and advised its removal by an operation. To this the patient could not bring her mind; therefore, to satisfy her wish, I directed some applications of considerable activity to be made to the part, and these she pursued a number of weeks, without any change. After this, she called on me, and, with some hesitation, begged to know, whether an application recommended to her would in my opinion be safe. This consisted in applying the hand of a dead man three times to the diseased part. One of her neighbours now lay dead, and she had an opportunity of trying the experiment, if not thought dangerous. At first, I was disposed to divert her from it; but recollecting the power of the imagination, I gravely assured her she might make the trial without apprehension of serious consequences. Awhile after, she presented herself once more, and with a smiling countenance informed me she had used this remedy and no other since I saw her; and, on examining for the tumour, I found it had disappeared."

Alkaline Extract of Jalap. By E. Durand.—Dr. Reese, in his work upon costiveness, speaks highly of an alkaline extract of jalap, prepared at the Medical Hall, 170 Piccadilly, London, as the medicine which agrees best with the stomach and small intestines, and to promote fecal secretions of the colon, without irritating the rectum. He gives no recipe for the preparation of this article, but mentions only that it is obtained by gently evaporating, in a water bath, an infusion of jalap in proof spirit, with the addition of a small quantity of carbonate of potassa to prevent the separation of the resin from the gum, on the evaporation of the alcoholic menstruum.

Having been requested by several physicians to prepare some of this extract, I operated in the following way. I digested for several days, at a common temperature, two pounds of pulverized jalap in one gallon of alcohol of 22° of Baumé's areometer; I strained and filtered the liquor which I evaporated slowly, in a water bath, to the consistence of a pilular extract; adding, from the beginning, small portions of carbonate of potassa, every time the resin began to separate from the liquid. The whole amount of alkali used was about twelve drachms.

I obtained thus seven ounces and a half of a beautiful extract of a reddish brown colour, possessing an alkaline taste; but none of that nauseous, irritating sensation peculiar to the powder or tincture of jalap. As the first part of this operation was made rather hastily, the action of the alcohol was not sufficiently protracted to enable me to obtain all the soluble principles of the jalap; otherwise, I doubt not, that the result would have been nearly double, for the jalap, submitted anew to the action of three quarts of alcohol, yielded a tincture nearly as strongly charged as the first.

The alkaline extracts of jalap and rhubarb may become highly interesting remedies in cases where saline purgatives and drastic or alcoholic preparations are to be avoided, it is a well known fact that resinous purgatives, united with soap or alkalies, act more gently and efficaciously, and without irritating the stomach and intestines. The soaps of aloes, scammony, jalap, &c. have of late been in great use in Europe; they are generally prepared by dissolving in alcohol one part of resin with two parts of soap and evaporating. The direct *saponification* of resin by the carbonate of potassa would have the advantage of containing more of the active principles in a given quantity than in the above soaps.

Dr. Reese administers this extract in the form of pills of three grains each, taken one, two or three, as the case requires, every night or every other night. Dr. Horner has exhibited it with success, according to the following direction·

℞. Alkaline extract of jalap,	2 drachms.
Syrup of ginger,	2 ounces.

f. sol. one spoonful at a time.

—*Journal of the Philadelphia College of Pharmacy, April,* 1831.

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The Use of Sulphate of Morphine in Ophthalmia.—Dr. Charles A. Lee, in a paper in our cotemporary, the *New York Medical and Physical Journal,* recommends the employment of a solution of sulphate of morphium in acute conjunctival inflammation, with intolerance of light. In one case of this description, attended with constant pain and itching, the relief is stated to have been immediate. Dr. Lee uses the solution usually of the strength of two grains of the salt to one ounce of water. It should be applied tepid.

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Peculiar Affection of the Organs of Taste.—Dr. Chandler Robbins relates in the *Boston Medical and Surgical Journal,* for May 31st, a case in which the sense of taste on one side of the tongue was impaired by want of exercise. It occurred in a lady who had one of the left molares so far decayed as to be extremely sensible to slight pressure, yet so sound in other respects as to dissuade her from parting with it; she therefore became accustomed to throw the entire burden of mastication on the teeth of the right side. Liquids, too, whether hot or cold, were at first cautiously, and at length habitually, passed through the mouth,

without coming in contact with the decayed tooth or its immediate neighbourhood. This state of things having continued about two years, it became necessary to extract this tooth. When the soreness of the gum had abated, and she began to use that side of the mouth, she was surprised to find that articles of food which were ordinarily pleasant to her, assumed a different and a disagreeable flavour when masticated there. The same was true of tea, coffee, and other liquids; and to this day, which is about a year from the extraction, the sense of taste on this side is both impaired in acuteness, and, what is still more remarkable, fails to perceive the true flavour of whatever is subjected to its action.

Dr. C. was at first inclined to suspect there was more fancy than philosophy in this lady's account of herself, although, so far as he had observed, she was the least of all persons given to vain imaginings; but further observation and inquiry have convinced him that the facts are as above stated; and he is the more confirmed in this opinion by the subsequent occurrence of another case precisely similar in all its details, excepting that it occurred in an old lady, whilst the subject of the former was young.

Case of Croup.—The following case of croup successfully treated with opiates and antispasmodics, is related in our cotemporary, the *Boston Medical and Surgical Journal*, by Dr. S. D. Townsend.

A boy aged three years, remarkably fat and plethoric, was attacked with croup early on Thursday morning, January 14th. An emetic was administered, and followed by ten grains of calomel and the warm bath. Partial relief was obtained through the day, but at night the respiration became worse, and continued without improvement in the morning. 15th. The breathing was now constantly stridulous; heaving of the chest; pulse full and frequent, with profuse perspiration. Dr. T. commenced with one grain of calomel and one of Dover's powder, alternately every hour, with a tea-spoonful of a mixture containing twenty drops of laudanum and two drachms of valerian in two ounces of syrup of squills. This treatment was continued through the day and night: a blister was also applied to the throat. 16th. No amendment: the case was now considered hopeless; the lungs and trachea were obstructed with mucus, and the peculiar croupy sound constantly present in the respiration. As the mixture was not retained on the stomach, it was omitted, and the calomel and Dover's powder continued every hour. 17th. The opium has produced continued sleep: there is less whistling in the respiration, and occasionally he is entirely free in his breathing, but the cough retains the same peculiarity so indicative of the disease. 18th. Entire relief; respiration free and easy; the cough, however, remained sharp and dry for several days, and then disappeared.

Dr. T. says that he was particularly struck with the success in this case, from having lost a child with croup in the same family, and of the same age, three years before, who was not attacked in a more violent manner. The treatment was then commenced by emetics, and a free bleeding from the jugular, and by leeches and the continued exhibition of calomel *without opium;* the effect of which was to prostrate the vital powers, and to deprive the patient of the assistance of those functions which tend to support life. The inference was irresistible, that the success of the present case was to be attributed to the difference in the treatment.

Ischuria.—Dr. L. Depeyre, in a communication in the *New York Medical Journal* for May last, states that he has always succeeded by the following method in dilating the urethra in cases of ischuria. Leeches, demi-baths, and emollient fomentations must be always premised. Eight cases out of ten, he says, will yield to these measures; in those which resist them, he proceeds as follows:—

"The patient being extended upon his back, I fill a common injecting syringe with olive oil, a little warmed. The canal is forcibly, but gently distended by this means; then withdrawing the syringe, and holding firmly the

end of the penis with the left hand, in order to retain the oil, I press the anterior part of the canal with the right, so as to force the oil to pass the stricture, and enter the bladder. This operation is repeated many times in immediate succession, until I perceive that the oil has passed the stricture with more ease and with less pain. I then have recourse to the catheter, and with little trouble succeed in passing the stricture."

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Carpenter's Oil of Cantharidin.—Mr. CARPENTER, an ingenious pharmaceutist of this city, has prepared a solution of the active principle of cantharides in oil, and which, it appears to us, will prove a useful preparation. A few drops of it, rubbed two or three times on any part of the body, is said to produce all the vesicating effects of the common blister plaster.

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University of Maryland.—THOMAS H. WRIGHT, M. D. has been elected Professor of Anatomy, and JULIUS T. DUCATEL, Professor of Chemistry, in the Medical Department of the University of Maryland.

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Dispensatory of the United States.—We understand that Drs. G. B. WOOD and FRANKLIN BACHE have in preparation a Dispensatory, intended as a companion to the Pharmacopœia of the United States, and which will exhibit a complete view of the present state of pharmacy. The learning and talents of these gentlemen authorize the expectation, that their task will be ably executed.

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Journal of the Philadelphia College of Pharmacy.—Our valued collaborator, Dr. R. E. GRIFFITH, Lecturer on Materia Medica and Pharmacy in the Philadelphia School of Medicine, has been appointed, by the college, the editor of the Journal of the Philadelphia College of Pharmacy, in the place of the late Dr. Ellis. That Journal could not have been placed in abler hands, and we have no doubt, from our intimate acquaintance with the talents, learning, and industry of the editor, that the character of that useful publication will be greatly advanced by this appointment.

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Clinical Illustrations of Fever, comprising a Report of the Cases Treated at the London Fever Hospital, 1828-29. By ALEXANDER TWEEDIE, M. D. Member of the Royal College of Physicians, London, &c. &c. Messrs. Carey and Lea have just published this valuable work—it is a useful companion to the excellent treatise on fever by SOUTHWOOD SMITH.

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MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

At the annual convention of the Faculty held on the 6th of June, 1831, the following officers were elected for the ensuing year:

Dr. Robert Goldsborough, of Queen Ann's, *President.*—John Fonerden, *Recording Secretary.*—H. Willis Baxley, *Corresponding Secretary.*—William W. Handy, *Treasurer.*—J. Fonerden, *Orator.*

MEDICAL BOARD.—*Examiners for the Western Shore.*—Drs. Thomas E. Bond, P. Snyder, J. L. Yeates, H. W. Baxley, J. Fonerden, E. G. Edrington, D. Turnbull.—*Examiners for the Eastern Shore.*—Drs. T. Thomas, P. Wroth, T. Denny. J. Sykes, George Martin.

LIBRARY DIRECTORS.—Drs. S. Baker, W. W. Handy, P. Wroth, J. Hopkins, T. Worthington, H. W. Baxley, J. Fonerden.

CENSORS FOR THE WESTERN SHORE.—*City of Baltimore.*—1st Ward, Drs. J. C S. Monkur; 2d, R. G. Belt; 3d, P. Snyder; 4th, M. Keene; 5th, A. Duncan; 6th, A. Alexander; 7th, E. G. Edrington; 8th, W. Cronmiller; 9th, E. Schwartze; 10th, R. H. Thomas; 11th, J. Armitage; 12th, A. L. Warner.—*Annapolis,* Drs. D. Claude, J. Ridgely.—*Frederick City,* W. B. Tyler, J. Baltzell.—COUNTIES. *Alleghany,* J. M. Lawrence, S. P. Smith.—*Washington,* W. W. Hitt, W. D. Macgill.—*Frederick,* W. Willis, J. Baer.—*Baltimore,* W. Mosher, J. Marsh.—*Harford,* W. Dallam, T. Worthington.—*Anne Arundel,* J. Hopkins, J. H. Owings.—*Montgomery,* O. Wilson, W. P. Palmer.—*Prince George's,* B. J. Semmes;

C. Duval.—*Calvert*, T. Blake, G. Dare.—*Charles*, W. Weems, W. Queen.—*St. Mary's*, J. Stone, W. J. Edelin.

For the eastern shore.—*Chestertown*, P. Wroth.—Counties.—*Cecil*, J. W. Veazey, A. Evans.—*Kent*, E. Scott, M. Brown.—*Queen Anne's*, J. Crane, R. Goldsborough, Jr.—*Caroline*, M. Keene, S. Harper.—*Talbot*, S. T. Kemp, N. Hammond.—*Dorchester*, W. Jackson, F. Phelps.—*Somerset*, S. K. Handy, W. Jones.—*Worcester*, J. S. Martin, J. P. R. Gillis.

Dr. Zollickoffer's resignation of the Vaccine Agency was accepted by the Convention, and the resolution adopted by the Convention of 1830, for establishing a Vaccine Agency, was annulled.

Since June 7th, 1830, the Examiners for the Western Shore have authorized the following gentlemen to practice Medicine and Surgery.

Ferris Jacobs, M. D.; Orrellana Owings, M. D.; Henry Miller, M. D.; Augustus J. Schwartze, M. D.; Joseph Prigg, M. D.; Amassa Kellogg, M. D.; James R. S. Purnell, M. D.; Thos. Sewall, M. D.; Thomas Lee, M. D.; John W. Anderson, M. D.; Geo. B. Mackenzie, M. D.; Jas. G. Lee; Anthony W. Prince, M. D.; James Garry, M. D.; Chris. G. E. Zoller, M. D.; Alex. F. Dulin, M. D.; Jas. Fitz Patrick, M. D.; Thos. Munroe, M. D.; Wm. Shegog; John S. Buck, M. D.; Alex. Stewart, M. D.; Samuel M. Tudor, M. D.; Philip Bodman, M. D.; Arthur Pue, Jr. M. D.; Maurice Morrison, M. D.; Thos. A. Fleming, M. D.; Robert M. Dunbar, M. D.; G. D. Norris, M. D.; John R. Ferguson, M. D.; John A. Valiant, M. D.; Jas. Armitage, M. D.; Azor R. Phelps; Robert A Durkee, M. D.; Horatio N. Lloyd, M. D.

Since June 1st, 1829, the Examiners for the Eastern Shore have authorized the following gentlemen to practice Medicine and Surgery.

Wm. A. Tateen, M. D.; Samuel W. Spencer, M. D.; James Dawson, M. D.; Alward White, M. D.; Sol. M. Jenkins, M. D.; William Helmsley, M. D., Walter L. Turpin, M. D.; A. M. Hardcastle, M. D.

The Library Directors have appointed J. Fonerden, Librarian.

JOHN FONERDEN, R. S

Observations on the Prevention and Cure of Hydrophobia, according to the latest Popular Publications in Germany. Read before the New York Medical and Philosophical Society. By Joseph Leo-Wolf, M. D.—This is a translation of the regulations, just published by the Prussian government, respecting canine madness, and the safest means of obviating its consequences in the human species, with some preliminary observations.

In relation to this disease, the generality of physicians, as well as the public, have given loose reins to their imaginations to the almost entire abandonment of reason. It is high time that its pathology should be soberly investigated. It is, we believe, of rarer occurrence than is generally supposed.

For the cure of genuine hydrophobia, caused by the virus of a rabid animal there is no treatment from which any success can be reasonably anticipated. When a person has been bitten by a rabid animal, the only prophylactic which we would repose confidence to prevent the absorption of the virus, is the entire excision, at once, of the part wounded. The memoir of Dr. Leo-Wolf may be consulted with advantage.

Neagle's Gallery of Portraits of Medical Men.—Mr. J. Neagle, an eminent artist of this city, is engaged in painting a series of portraits of distinguished medical men, which he intends to have engraved in the best manner. The portrait of Dr. Chapman is already completed—the likeness is excellent, and the engraving is one of the finest specimens of the art ever produced in this country, and does infinite credit to the artist, Mr. Kelly.

The portrait of Dr. Physick is nearly finished, and it is an admirable likeness; it will be shortly put into the engraver's hands.

We trust that Mr. Neagle will receive sufficient encouragement to enable him to complete his design.

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